THE EFFECTS OF CREATIVE DRAMATICS ON READING COMPREHENSION AND LANGUAGE/THOUGHT OF SECOND GRADE CHILDREN

By

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Abstract

The purpose of this study was to determine whether training in creative dramatics could enhance the reading comprehension and language/thought of second grade children. Seventy-one second graders were randomly assigned to an experimental and control group. There were approximately equal numbers of girls and boys in each group and there were no significant differences between average measures of reading comprehension and intelligence in the two groups.

The creative dramatics training administered to the experimental group involved role-playing material from traditional folk tales. Twenty-four training sessions were conducted over twelve weeks. During these sessions the controls played various learning games that involved no reading or dramatics.

A standardized reading comprehension test was administered to both groups before and after the training. Reading was also measured after training using an informal Cloze procedure based on a folk tale.

Measures of narrative language/thought were obtained from a story-retelling/story-inventing task.

Based on prior findings in the fields of reading, language/thought development and creative dramatics, it was hypothesized that as compared with the control group, the experimental group would show significantly higher performances on the standardized reading test, the Cloze procedure, and the language/thought measures.

Analyses revealed no significant differences between the groups on any of the foregoing tests and measures. Discussion suggests that this failure to find significant effects was due to methodological problems. It appears that the statistical analyses employed were too conservative, and the creative dramatics training was not sufficiently prolonged or intensive.

Informal observations by the author indicated that the creative dramatics training was a positive learning experience for the participating children. It is suggested, therefore, that further research is warranted on methods of creative dramatics training and the evaluation of its effects on reading comprehension and language/thought.

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K.S.R.

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CHAPTER ONE

Introduction

The purpose of this study was to see whether an experimental program of creative dramatics had any significant effect upon story retelling/inventing and reading comprehension of second grade children.

Reading, language and thought all interact, are all based upon developmental and constructive processes, and are all concerned with meaning (Goodman & Goodman, 1979; Smith, 1971; Tierney & Pearson, 1983). Meaning can be regarded as a continuum that begins with a concrete, or context-dependent, concept and progresses toward the most abstract or decontextualized concepts (Piaget, 1926/1959). Reading and language also progress from the concrete to the abstract, and the goal of efficient reading is to move from contextualized text (with great dependence on concrete cues such as pictures or real experience), to decontextualized text from which meaning may be constructed at a more abstract level (Chall et al., 1982; Olson, 1977). These characteristics may all describe creative dramatics as well: a developmental process concerned with the construction of personal

meaning in a communicative context. As such, creative dramatics may also interact with and contribute to the development of the reading, language and thought of second graders.

Creative Dramatics

Creative dramatics is an art form conceived of by Ward (1957) as a process of spontaneously translating ideas into movement, action and words. Ward felt such improvisation provided opportunities for children to express their own ideas, emotion, imagination and understanding. Stewig (1976) defined creative dramatics as:

> ...an art form for children which emphasizes process instead of a product. In...drama, children use their bodies and voices to create a response to a stimulus material. The motivation may be visual, aural, or related to another sense. The child is required to create a response of his own to create a personal reaction to the stimulus material. (p.32)

McCaslin (1974) emphasized that creative drama is informal and based upon a story which may or may not be original. The dialogue is improvised by the actors, and there is no audience. She added:

> The replaying of scenes is different from the rehearsal of a formal play, in that each member of the group is given an opportunity to play various parts; therefore, no matter how many times the story is played, it is done for the purpose of deepening understandings and strengthening the performers rather than perfecting a product. (p.7)

Moffett (1968) contended that drama and speech were essential to all components of language arts programs, and that dramatic interaction with other people could help develop language and thought. Siks (1977) expanded upon this thesis by recognizing:

> ...the importance of language as a means of ordering reality in thinking, talking, listening, reading and writing. Through the creative language processes used to explore, share, and communicate experience in drama, children develop abilities to use language independently and creatively. (p.10)

Siks developed a process-concept structure approach in which the child, in the role of player, playmaker or audience, explores the creative and learning processes in drama that include perceiving, responding, imagining, creating, communicating and evaluating. Fundamental concepts for the player include relaxation, concentration, trust, body movement, use of the five

senses, imagination, language and characterization.

The stimulus for creative drama may be a problem, situation or story presented to the group by an adult leader who guides them in imagining, enacting and reflecting upon human experience through sensory exercises, pantomime, improvisation or story playing. The group, which may be divided into players and audience, or may all participate at one time, is encouraged to concentrate, observe, remember, and imagine. Once the activity has been introduced and the problem identified, the whole group, or some designated members "play", followed by evaluation, discussion and replaying by different members. In the case of story drama, large or small groups plan the story before "playing" it. This includes setting the time, place, order of events, and assignment of roles. After the scene has been played, it is evaluated by the group (both actors and "audience"), in a constructive manner. The group evaluation may include the identification of problem areas, or discussion and clarification of motivation and characterization. The scene is then replayed with the same, or different, actors, followed by further evaluation and/or planning of the next scene.

The implications of creative dramatics for reading necessarily include aspects of language and thought. All of these will be summarized briefly in the following subsections dealing with relevant theory and research.

Reading

Over the past twenty years theorists have described reading in terms that have moved away from behavioristic skills models to psycholinguistic-based processing models which, in varying degrees, include information processing, prediction, hypothesis testing, and construction of meaning through the reader's interaction or transaction with the text. There is general agreement that reading is a thinking process (Goodman, 1967; Neisser, 1967; Palincsar, Ogle, Jones, Carr & Ransom, 1985; Smith, 1971) facilitated by the understanding of symbols as representations of meaning and language (Gibson and Levin, 1975). Reading comprehension, however, may also include the ability of the reader to predict text based upon past knowledge of language and print. Such prediction is aided by the redundant orthographic features of print and the redundant features of language at the syntactic, semantic and text structure levels (Goodman & Goodman, 1979; Rumelhart, 1977a; Smith, 1973). Furthermore, each reader's prior knowledge of the world may interact with

specific reading and language experience so that the reader, depending upon his or her purpose for reading, constructs meaning from an author's text which may be a unique response (Rosenblatt, 1978). It is also possible that readers and writers, both, compose meaning similarly (Tierney and Pearson, 1983).

Based on assumptions about the importance of language, prediction, and prior knowledge for reading, many teachers believe that beginning readers will better perceive the relationship between speech and print if the first texts children read are representations of their own language and experience (Ashton-Warner, 1963; Van Allen, 1976; Veatch, Sawicki, Elliott, Flake & Blakey, 1973). It is also commonly accepted that reading stories aloud to young children contributes to the language and conceptual development necessary for beginning reading (Durkin, 1966; Strickland, 1955; Smith, 1978). Reading to children may familiarize them with the sound of literary, or story, language that differs from their own speech. Eventually, beginning readers are confronted with printed symbols which no longer correspond to their own "language experience". Print is no longer predictable "speech written down". How can the child be helped to make the transition from reading personal utterances to reading text in literary

form? One answer may lie in the attempt to make unfamiliar text more familiar and predictable.

It is a premise of the present writer that, when reading to children, the selection of stories with highly predictable patterns of language and textual form (i.e., story grammar) may help the children construct meaning when they later read similar stories themselves (Rumelhart, 1977a; Applebee, 1977, 1978). Folk and fairy tales represent a large body of literature that is of high interest to children of second grade age (Bettelheim, 1976; Favat, 1977; Norvel, 1958; Terman and Lima, 1931) that fulfills the predictability requirement.

Predictability of text is dependent to a great extent on redundancy which occurs at the sentence or paragraph level. The author's use of language patterns may become more apparent (i.e., predictable) with passage length. Bartlett (1932) suggested that the most salient factor in adult memory of prose in American folk tales was the internal structure of the story. Propp (1968) examined 100 Russian fairy tales and found they were all brief, symmetrical, and contained easily recognized types of characters, contrasts of good and evil, and patterns of events. He identified 31 actions or functions that could be performed by characters in

all the tales such as: departure (in which the hero leaves home) and punishment (in which the villain is punished). Propp's framework was applicable to non-Russian tales as well.

The internal structure of folk tales may form a framework for encoding and recall of an entire passage or text and may be conceived of as a story grammar (Rumelhart, 1977a; Stein and Glenn, 1982). In a story grammar, there are syntactic categories of information (e.g., story setting, events, attempts), and semantic rules that define relationships between categories (e.g., cause, motivation). Mandler and Johnson (1977) suggested that even children as young as first graders demonstrated an implicit understanding of story parts and their relationship to each other. Thorndyke (1977) found that the recall of folk stories was aided by the hierarchical nature of the story structure. Folk tales have such consistent internal structure that their settings and events have even been diagrammed and used to facilitate recall by children (Guthrie, 1977).

Based on these considerations, folk and fairy tales (fairy tales are folk tales with magical agents) were the core of the story dramatizations in this study. It was decided that, in addition to their inherent interest for second graders, their internal structure would make

them easier to remember for "playing". If the story language and structure are internalized, they should become part of children's repertory and therefore provide "prior knowledge" useful in reading folk tales and other stories. Such experience should also help the child to retell or compose a story.

Language/Thought

It is widely accepted that children understand new concepts better if they are presented at a concrete, non-verbal level; the earliest, pre-linguistic thought is believed to be based on sensorimotor cognitive schemas (Ginsburg & Opper, 1969; Piaget, 1952/1963; Vygotsky, 1934/1962). Bruner, Goodnow and Austin (1956) suggested that a child best understands information that can be represented in three modes: enactive (sensorimotor representation), iconic (mental or sensory images), and symbolic (abstract symbols such as words). The three modes correspond to the creative dramatics process in which ideas are translated spontaneously into movement, action and words (Ward, 1957). In addition to its communicative function, language is considered to be related to thought (Bruner et al., 1956; Piaget 1926/59; Vygotsky, 1934/1962, 1978). Vygotsky believed that language interacts with thought by organizing, interpreting and enhancing internalized meanings.

The study of language acquisition has, like that of reading comprehension, moved beyond behaviorist reinforcement theory to a process approach concerned with the construction (and sharing) of meaning. John, Horner, and Berney (1970), believing that language acquisition is not a unitary process, examined one aspect of language: thematic, connected discourse. They suggested (in line with Vygotsky's thinking) that the development of thematic discourse is a creative process in which children fuse their own language and thought with recently heard adult discourse that has been selected, transformed and stored in a simplified narrative form.

Rosen (1986) described narrative as the most important of the discourse processes:

> ...it is a mode of knowledge emerging from action
> it is the imposition of formal coherence on a virtual chaos of human events
> it is a primary and irreducible form of human comprehension
> it is the central instance or function of human mind. (p.230)

Van Dongen (1987) suggested a continuum from personal narrative which organizes experiences and content around human intention (Bruner, 1983) to

literary narrative in which the child displays a sense of story (Applebee, 1977). This sense of story, while seemingly natural, reflects the culture in which the thinker/speaker has experienced oral and written story forms, and may enhance prediction skills and reading comprehension.

Reading and Language Measurement

In order to see whether hearing and dramatizing folk tales would enhance children's ability to read similar stories, an informal cloze procedure was devised for the present study. The cloze procedure has been defined as "a method of systematically deleting words from a prose selection and then evaluating the success a reader has in accurately supplying the words deleted." (McKenna and Robinson, 1980, p. 5). Deletion strategies vary and words supplied may be verbatim or synonymic and based on free choice or forced choice.

There has been debate about the processes involved in the cloze procedure. Gestalt psychologists viewed it as the completion of a perceptual task motivated by the individual need for closure. Some regard it as a language task (Weaver, 1965) while others believe it is primarily a reading comprehension process (Bormuth, 1968, 1969; Rankin, 1958, 1978). Researchers have compared cloze with informal reading inventories

(Ransom, 1968; Mork, 1971) and standarized reading tests (Rankin and Culhane, 1969; Smith and Zinc, 1977) and found cloze to be a valid measure of reading comprehension. Both Gallant (1965) and Ransom (1968) found cloze acceptable for testing second grade children.

Others have examined deletion strategies. MacGinitie (1961) found comprehension correlated with the number of words between deletions. Despite the context, deletions every 3 words or less made comprehension difficult; deletions every 6-24 words were equally restorable; and deleting every fifth word was found to be the best pattern. Researchers have also investigated the scoring of cloze tests and compared verbatim (the exact answer) with synonymic responses (substitutions that are acceptable both syntactically and semantically). McKenna (1976) found scores for both types of responses correlated well with standardized reading comprehension tests. Vaughan, Tierney and Alpert (1977) also found high correlations for synonymic scoring among school children of various ages.

In the present study, two scores were obtained for each subject: verbatim alone, and verbatim plus synonymic. Only the latter were analyzed since they seemed more closely aligned with the meaning emphasis of

the reading definition used here.

The relationship between reading achievement and language development has been the focus of much research (Cazden, John and Hymes, 1972; Loban, 1963, 1976; Strickland, 1955, 1962). Usually educators have administered standardized reading tests and compared the scores of high and low readers with their performance on vocabulary and sentence usage measures. Language measurement, itself, is a controversial area. In the present study, language in the form of narrative discourse in a story retelling/inventing task was examined.

John, Horner and Berney (1970) studied "The Emergence of Thematic Sequential Discourse" by analyzing language in whole stories children retold while looking at pictures in a storybook. It is a premise of the present study that thematic sequential discourse (i.e., narrative discourse or storytelling) is a form of language closely related to that which is encountered in storybooks.

John et al. were concerned with developmental stages of thematic sequential speech and the close connection between language and thought emphasized by Vygotsky (1926/1962). Since the interactions of language and thought are relevant to the present study,

a modification of the procedure employed by John et al. was introduced. It entailed adding a story invention component to the story retelling task in order to investigate whether exposure to a program of creative dramatics improved second graders' ability to retell and compose a story. John et al. were interested, in part, with the content of their subjects' story retelling and analyzed the stories for concrete or abstract quality of thought and accuracy. That approach to eliciting and segmenting a sample of language/thought was employed in the present study.

A review of the literature on language measurement revealed many other more traditional procedures for measuring language. Loban (1963), in a longitudinal study of the language of school children, developed a clear-cut procedure for segmenting and scoring basic units of communication that offered additional data of value and was compatible with the John procedure. Therefore, the basic units for analysis in the present study were adaptations of Loban's language measures and John's language/thought measures.

Purpose of the Study

The purpose of the present study was to investigate the effects of a creative dramatics program, in the form of story dramatization of folk tales, on the reading

comprehension and language/thought of second grade children.

Definition of Terms

For the purpose of this study, the following definitions were established:

Creative Dramatics referred to a process in which children heard, discussed, planned, played, evaluated and replayed folk tales, through group interaction and improvisation, without the presence of an outside audience.

Reading Comprehension referred to a thinking process facilitated by the understanding of symbols as representations of meaning and language.

Language/Thought referred to narrative language/thought elicited by a story retelling/inventing task.

Statement of Problem

All the second graders in one public school were given pretests and posttests for reading comprehension and oral language performance in a story retelling/inventing task. A randomly selected half of the population participated in an intervention program of creative dramatics for 24 sessions over 12 weeks. The main activity for most sessions was the dramatization of folk and fairy tales which had been

read to the group. It was hypothesized that creative dramatics intervention would positively affect reading comprehension and the production of language/thought in story retelling/inventing.

The significance of the study should be both theoretical and practical. Theoretically, the measurement of narrative discourse during story retelling/inventing may offer a language assessment procedure that is more closely related to reading comprehension than other measures. The practical significance may lie in the realm of reading instruction. Creative dramatics, specifically story dramatization of folk tales, may be a process that aids the beginning reader in the transition from language experience to formal literary text. Creative dramatics may also aid the development of language/thought expressed in story retelling/inventing.

The effects of the experimental creative dramatics program were assessed by comparing the performance of experimental and control groups on the measures of reading and narrative language. For purposes of statistical analysis the following null hypotheses were tested:

I. There is no significant difference in reading comprehension between the experimental (creative drama

treatment) and control (non-treatment) groups as measured by NCE standard scores on the Gates-MacGinitie Reading Test, Form B, Level B (pretest and posttest).

II. There is no significant difference in reading comprehension between the experimental and control groups as measured by raw scores on an informal cloze reading procedure (posttest only).

III. There is no significant difference in narrative language performance between the experimental and control groups on a story retelling and story invention task (pretest and posttest) as measured by:

A. Total language (total number of words)

B. Total number of meaningful utterances (all communication units and fragments that are part of the story)

C. Mean length of utterance (the ratio of the total number of words in communication units and fragments to the total number of communication units and fragments)

D. Total number of mazes

E. Total number of fragments

F. Total number of comments

G. Total number of inaccurate communication units

H. Total number of story language phrases

I. Total number of original communication units

J. Percentage of all words in communication units

K. Percentage of picture-dependent communication units

CHAPTER TWO

Review of Related Literature

The aim of this study was to investigate the effect of a creative dramatics program on reading comprehension and language/thought of second graders. It was clearly impossible, however, to review in depth all the relevant literature in these diverse areas. Instead, since the major independent variable, or "treatment factor" was creative dramatics, that process was discussed at length. As dependent variables, reading, language and thought were also significant, but since they are more familiar to most professional educators, and were only conceptualized in this research according to measures that are defined operationally in Chapter Three (Methods and Procedures), an exhaustive review of the theory and research literature on reading comprehension, language and thought was not attempted here. Those aspects of communication and cognition were discussed in relation to the creative dramatics literature.

A search of the literature relating to this study was conducted by the writer through the ERIC system using the following descriptors: creative dramatics,

story drama, improvisation, play, role-playing, story-telling, narrative language, narrative discourse, language, reading, reading comprehension, and reading achievement. Issues of the Education Index, Psychological Abstracts, and Dissertation Abstracts from 1970 to 1988 were examined for pertinent articles and references.

Creative Dramatics and Reading

The roots of creative dramatics lie in symbolic play, in which the young child, through sensorimotor activity, constructs mental representations of actual objects, events or situations (Piaget, 1926/1959). As the child matures, the symbolic function of language develops and facilitates communication and the sharing of thought in all social contexts, including play. The link between reading and play may lie in the search for meaning (Collier, 1983). Creative dramatics may provide opportunities to broaden or deepen the child's mental representations, or concepts, and language, thereby facilitating the connection between experience and the printed page that enhances comprehension (Booth, 1985; Tierney and Pearson, 1983). It would, therefore, be an appropriate activity either before or after specific classroom reading.

A review of the research literature indicates that a program of creative dramatics influences reading directly in the areas of readiness, oral reading, achievement, comprehension and motivation. Indirectly, it appears to affect reading by improving self-concept, thinking skills, and the language-related skills of vocabulary development, story-writing and awareness of story language.

Reading Readiness

In examining reading readiness, Pelligrini (1980) found that symbolic and dramatic play were related to kindergartners' prereading, writing and language achievement and might be a better predictor of first grade reading and writing success than I.Q. or socioeconomic status. Miller and Mason (1983) had kindergartners improvise story dramas (act out a story that had been read to them) and found it improved reading readiness, vocabulary development, oral reading, comprehension and self-concept.

Rice (1972) reported that 40 mixed male and female kindergarten children (no ages given) in two different classes showed significantly improved reading readiness and picture vocabulary test scores after being exposed to a semester length "moving into drama" program. The program involved perceptual-motor activities, expressive

movements and creative dramatics. No control groups were employed but improvement was judged significant by testing against established norms for kindergarten-level performance.

In Yawkey's study (1980), two experimental classrooms of kindergartners, who participated in role-playing activities in story drama for 15 minutes daily over seven months, performed significantly better on the Gates-MacGinitie Reading Readiness Test than did students in two control classrooms who did cut-and-paste activities during that time. She concluded that role-playing encouraged children to feel, act, and think like the characters they portrayed, thus enhancing story comprehension and concepts.

Reading Comprehension

In the literature that addresses the direct effect of creative drama on reading comprehension of school age children, Kardasch and Wright (1987), in a meta-analysis of studies, concluded that there are moderate, positive gains in reading, oral and written communication, person-perception, and drama skills. Wright and Young (1986), in an experiment with 21 inner-city first grade classrooms, found that two interventions, reading to children and creative dramatics, had intrinsic value and afforded modest reading gains in criterion-referenced

tests. Pellegrini and Galda (1982) examined the differences in story comprehension for 108 children, K-2, who were read a folk tale in small groups followed by one of three follow-up activities: story drama, drawing of story events, or classroom-like discussion. On a criterion-referenced test, the story drama subjects appeared to have a better understanding of story language and performed significantly better in grades K-1 than did the children who experienced the other two interventions.

Wagner (1983) integrated language arts and content area studies through creative drama techniques. As prereading activities, fourth grade students brainstormed what they knew about specific subjects (e.g.,Indians), acted out and discussed information related to the subject, wrote from the perspective of the subject, and then read to confirm or reject their hypotheses and expand their knowledge base. Both reading comprehension and motivation improved. No control groups were used, but reading improvement was measured by criterion referenced testing. Stewig (1981) found students in a creative drama program improved more than was expected in reading comprehension in the areas of inference, main idea, and details. There was also improvement in their ability to summarize, classify,

form judgments and understand figurative language. Carlton and Moore (1966) stated that when sixth graders read for the purpose of selecting stories to dramatize, reading achievement test scores and self-concept were significantly higher than that of students receiving regular basal reader instruction. They concluded that story dramatization was a potent motivating force. In other studies dealing with secondary school students, reading to find a story to act out and/or a script to write have also been strong motivators for reading (Cox & Many, 1989; Manna, 1984; Miccinati and Phelps, 1980).

Henderson and Shanker (1978) found third graders in both high and low reading groups, who did story dramatization after reading, comprehended the story significantly better than a comparison group of average readers who did basal reader workbook skills after reading. In a study by Gourgey (1985) an improvisational dramatics program had a significant impact on reading achievement and school attitude among 141 Black and Hispanic students in grades 4-6. The students were taught role-playing, story-making, play-writing and improvisational exercises. Pretest and posttest scores revealed significant gains on standardized reading achievement tests and in students'

attitudes about trust, acceptance and awareness of others, self-awareness and self-expression.

The limitations of the research cited lie primarily in two areas: the lack of controlled study in some instances, and the nature of the reading measures used. In the case of reading readiness, one might indeed argue that very little "reading" is involved in any of the instruments used, and that the language-based subtests are more closely related to creative dramatics than are tests of visual and auditory discrimination. Criterion-referenced tests were used frequently with the younger children and assessed comprehension through oral questioning and response. In the standardized tests used for children from Grade One on, reading comprehension was measured by short, discrete passages which allowed the reader little opportunity to use his or her knowledge of the structure of text or connect personal experience with text.

Creative Dramatics and Language

A review of research literature indicates that creative dramatics may have a positive effect on students' listening skills (Washburn, 1983; Yawkey, 1980); expressive language and vocabulary development (Blank, 1954; Heathcote, 1983; Lehr, 1983; Lovinger, 1974; Miller and Mason, 1983; Moffett, 1968; Smilansky,

1968; Verriour, 1983); written communication (Furner, 1976; Pellegrini, 1980; Saltz and Johnson, 1974; Stewig and Young 1978); and oral story-telling ability. It also influences the child's sense of perspective, and it is this awareness of another's frame of reference that is reflected in both written and spoken narrative--one more link between language and thought.

Christie and Noyce (1984) examined research connecting play with writing and concluded that play may affect writing readiness because it contributes to young children's monologues, perspective-taking, ideational fluency, and narrative skills.

Rubin and Dyck (1980) studied the private speech emitted by 13 male and 7 female preschoolers, aged 41 to 63 months, who were each placed for ten minutes in a solitary play situation. Analysis of all their utterances during this period showed that children talked to themselves during constructive and dramatic play, but more during constructive play. Overall, private speech apparently served a self-regulatory function that seemed to make children more aware of their own behavior, while also providing practice for social discourse and narrative skills.

Saltz and Johnson (1974) compared the effects of four months of training in thematic fantasy play, with

training in "dimensionality" (labelling and classifying objects), on several measures of cognitive abilities, including a story-telling task. Subjects were 80 disadvantaged male and female pre-schoolers from various ethnic and racial groups, who ranged in age from 2 years, 10 months to 5 years, 6 months. They were placed in four groups (3 experimental and 1 control) and matched according to age, pretest intelligence and verbal skills. The results of a factor analysis indicated significantly better story-telling ability for the thematic fantasy training groups. These groups showed significantly higher total verbal output, and greater use of inferences and connective statements.

Caster and Pellegrini (1984a, 1984b) observed that four and five-year-olds impose their own organization of activities and episodes during constructive and dramatic play. The older children were able to connect two or more events in sustained drama, which relates to story-telling ability.

In a study of 108 K-2 children, Pellegrini and Galda (1982) divided students into small groups to whom a folk tale was read, followed by one of three activities: story dramatization, story discussion, or drawing about the story just heard. Each child was then asked to retell the story to the same, or a different,

adult. This was done three times with different stories, but only the last retold story was analyzed. The results indicated that the story drama treatment promoted more coherent narration, particularly in the subjects' ability to "lexicalize meaning" through a flexible use of "register" (i.e., modifying the explicitness of language and reference according to the listener's knowledge of the story). This use of register, an important skill in any communicative context (Pellegrini, DeStefano & Thompson, 1983) is related to role-playing and assuming another's point of view.

Washburn (1983) suggested that when children heard stories, their involvement increased when creative activities such as story-telling or story drama were introduced. Involvement was observed to deepen through internalization of story language as well as insights into character and motivation. Edmiston, Enciso and King (1987) utilized "narrative theater" with fourth graders to foster language, reading, writing and thinking connections for specific purposes and contexts in an uncontrolled study. In a social studies unit about Christopher Columbus, the class was assigned different "frames" (Heathcote, 1984) or real-life perspectives, which altered their purposes for reading

and writing about him. They read and wrote as part of a drama while "in frame" in order to help deepen prior concepts as they developed new ones. This interaction of reading, language and thought through the mediation of creative dramatics is a main concern of the present study.

Ten boys and ten girls randomly selected from fourth and fifth grade classes (no ages given) were shown a short silent cartoon by Stewig and Young (1978). Each of these subjects was then paired with a kindergarten child to whom they told the cartoon story. Recordings of each story-telling session were analyzed according to total verbal output, total clause output, vocabulary diversity, and total main clause output. Over the next ten weeks, the subjects were given a total of twenty creative dramatics training sessions in the form of two 40 minute sessions per week. When retested on the cartoon story-telling task, significant improvement was found on all language measures except vocabulary diversity, which improved but did not reach an acceptable significance criterion.

The Effect of Creative Dramatics on Language/Thought

The research on creative dramatics and thinking includes cognitive development and creativity. References to cognitive development are primarily

theoretical and involve concept formation (Washburn, 1983), and role-playing and perspective-taking (Heathcote, 1984; Pellegrini and Galda, 1982; Smilansky, 1968). The spontaneous play of eight male and eight female preschoolers (age range 43 to 55 months) was investigated by Rubin and Maoni (1975). Based on one minute observations of free play conducted over 20 consecutive school days, various modes of play were identified and scored (functional play, constructive play, dramatic play and games with rules). It was found that only dramatic play was significantly and positively correlated with classification abilities and role-taking. Dramatic play was further discussed as facilitating the reduction of egocentrism and the production of symbol manipulation.

The relationship between measures of the cognitive play of 65 male and female kindergarten children (average age 6 years, 9 months) and their performance on various achievement tests was investigated by Pellegrini (1980). Play was significantly correlated with language use, reading, and writing achievement. The measure of play most highly associated with performance on these achievement tasks was dramatic play, that is, a mode of play requiring the definition and interpretation of symbols.

In the literature on learning styles, Arnheim suggested that thinking can be enhanced through movement and gesture (1969). John-Steiner (1985) emphasized that children's knowledge is tied to action but, despite their ability to represent thought through visual imagery, dreams, movement and gesture, schools rely primarily on verbal representations. While the preceding is theoretical, it still makes a strong argument for schools to integrate creative dramatics in their curricula to assist learners.

Creativity may be referred to as originality or divergent thought and defined as a novel and appropriate response to an open-ended task (Hennesey and Amabile 1988). Johnson (1976) rated the frequency of fantasy play among 63 (3 to 5 year old) girls and boys. Significant correlations were found between the levels of spontaneous social fantasy play exhibited in a nursery school situation, and performances on a story-telling task, as measured by story fluency ratings, and uses of common objects in the stories. The highest correlation (.52) was found between spontaneous fantasy play and the uses of fantasy (fanciful uses of familiar objects) in story telling. Yawkey (1986) found that creativity increased among 3 to 5-year-olds when they participated in creative play and dialogue. Stewig

(1976) suggested that story improvisation challenges children to move beyond dramatization of stories they know and aids creativity.

Language Measurement

In an effort to integrate traditional and non-traditional methods of language sampling and segmentation, procedures for this research have been adapted from both Loban and John, Horner and Berney. Therefore a review of their two studies will be presented here in depth.

Loban (1963, 1976) conducted a longitudinal study of the language of school children K-12 and the relationship among the language arts components: speaking, listening, reading and writing. In the first phase of his study (1963) he obtained demographic data on 338 kindergartners in Oakland, California public schools and administered an individual oral vocabulary test to help determine high and low language users, along with teacher ratings.

Then a language sample was elicited from each child in two parts. First, conversation was initiated by the examiner about friends, games, T. V., etc. Then a series of six pictures was presented and the kindergartners asked to tell what they saw in each, and what they thought about it. These language samples were

recorded, transcribed, segmented and scored in three ways:

1. Phonological units (utterances occurring between definite silences or pauses indicated by a drop in pitch)
2. Communication units (a grammatical, independent clause with any of its modifiers occurring between two silences)
3. Language mazes (hesitations, false starts, meaningless repetitions; unattached fragments which are not communication units nor necessary for meaning; "language tangles")

All communication units were further analyzed for frequency of use of several syntactical forms such as conjunctions and verb tense. Then the content of the language samples of the extreme high and low language users was further analyzed for use of subordination; function (eight categories including facts, interpretation and figurative language); and style and vocabulary (diversity and frequency). The data for high and low language users were compared with data on subordination, function, style and vocabulary yielded by a random sample of all the children. Samples of language and writing were obtained each succeeding year. Reading was measured by an index that included K-3

records of basal reading performance, records of supplementary and recreational reading, standardized reading test scores (grades 4-6), and annual teacher ratings.

Loban correlated all these data and found that I.Q. scores obtained in second grade and the kindergarten vocabulary test had the highest correlation (.84). There was a positive correlation between all the language arts components. From third grade through sixth grade, those who excelled in reading had also been identified as high language users in kindergarten. However, poor sixth grade readers were not necessarily low language users.

Developmentally, language increased for all children in the total number of words produced, number of communication units, and number of words in communication units. The high language group used communication units with more words, complexity, flexibility, movables and tentativeness. Low language users produced more mazes and incomplete communication units.

The high reading group in first grade continued to excel in reading through sixth grade, while the low reading group continued to perform below grade level, with the gap widening after fourth grade. Among low

socio-economic level children there were proportionately more low language users who were also poor in reading, writing and language usage.

Loban concluded that competence in spoken language appeared to be "basic" for competence in reading and writing. Societal and cultural factors also had an impact on language use and school success.

John, Horner and Berney (1970) described a series of studies of the language acquisition of minority and/or bilingual children ages 4-7 years. They used a story-retelling technique for obtaining protocols of continuous verbalization in a naturalistic setting. (They were interested in children's language as a communication process.) In one study, John analyzed the stories that 60 first graders in New York City retold to an adult after she or he read a picture book to each child. The children were all Black, at least average in ability, and belonged to three socio-economic strata: lower-lower, upper-lower and middle-class.

The story-retelling was done with reproductions of the book's pictures, presented in sequential order, on separate cards without text. The child's task involved a process that included three elements: internalizing a story, linking a picture with some version of the remembered story, and producing language in the presence

of a listener.

The stories were analyzed separately by linguistic and cognitive criteria. The linguistic analysis examined the transformation of the story into the subject's own words--a reflection of individual syntactic and vocabulary development. A count was made of the number of words and "phrases" each child produced.

The cognitive analysis examined the quality of the child's story for accuracy, organization and imagination. The first measure was for accuracy of recall. Then phrases were analyzed for content: stimulus-derived (phrases recalled from the story that were explicit in the picture); story-relevant inferred (phrases retold that were not explicit in the picture); and nontext-based phrases (such as irrelevant picture-labelling or utterances similar to Loban's mazes). Percentages for these four categories were determined from the total number of phrases produced by each child.

The results of the study showed that membership in a social class did not affect individual performance in verbal output or the production of picture-related phrases. However, middle-class children produced fewer nontext-based phrases and more story-inferred phrases than the other groups. The findings were similar to

Loban's and indicated that lower S.E.S. children, when compared to middle-class children, were equally verbose, but less organized, less task-oriented, less accurate, and more dependent on context.

The interpretation of "nontext-based phrases" by John, Horner and Berney differed from Loban's interpretation of "mazes" (which were similarly defined). John et al. did not regard these units of speech as meaningless, but as representations of a search for meaning and organization. Loban, although he later recognized the possibility of this interpretation, nonetheless defined mazes as essentially meaningless in his scoring procedures.

Another result of the research by John, Horner and Berney was the development of the following preliminary model of Stages in Story Retelling:

Stage 1	Sequential picture labelling
(3 years)	(Holophrases: one word per picture)
Stage 2	Skeleton story
(4 years)	(One phrase per picture)
Stage 3	Embroidered story
(5 years)	(Phrases half-remembered and half-invented; 2 or 3 phrases per picture)
Stage 4	Accurate and concise story retelling
(6 years)	

Summary

In general, the review of the relevant literature suggests a relationship between creative dramatics and performance in both reading comprehension and language/thought, such that reading comprehension and language/thought will be enhanced by experience with creative dramatics.

CHAPTER THREE

Methods and Procedures

In order to determine whether an experimental program of creative dramatics had a significant effect upon narrative language and reading comprehension development in second grade children, the following methods and procedures were employed.

Subjects

The subjects were the entire population of second graders in one public elementary school in Unified School District 383, Manhattan, Kansas. Three classes, with a total of 80 children, provided a representative sample of the city's population, both racially and socio-economically. The school, in an older city neighborhood, served low and lower-middle income families as well as bussed middle and upper-middle income families. The children ranged in age from 7 years and 1 month to 9 years and 1 month in October of the school year and varied widely in their abilities.

Of the total population of 71 second graders, 41 were boys and 30 were girls. The experimental group included 21 boys and 16 girls and the control group had 20 boys and 14 girls. The mean age for the entire

population was 7 years and 5 months. The experimental group mean age was 7 years and 6 months, while the control group mean age was 7 years and 4 months.

Estimates of group intelligence were obtained from the Cognitive Abilities Test, Primary Battery, Level 2, Form 3 (Thorndike and Hagen, 1979). The test is an untimed multiple choice group test of verbal, non-verbal and quantitative reasoning. It yields a single standard age score which indicates individual cognitive development in relation to peer age groups. The range of scores (in months) for the entire second grade was 74-142, and the mean score was 103 (expected value = 90 for this group).

All three second grade teachers had had students who participated in a pilot program of creative dramatics with the writer the previous year (i.e., the present third graders). They and the school principal were quite enthusiastic about having children from their current classes engage in creative dramatics with the writer for the study. The three teachers were experienced, had taught in the school district at least six years, and shared a reading curriculum based on the Houghton-Mifflin basal reading series. Although the children were not systematically tracked, the principal assigned them to teachers based on teaching-learning

styles, parental preference, and classroom management styles. Students with reading difficulties were assigned more often to some teachers than others. In order to eliminate the possibility of any systematic bias in the assignment of children to the treatment or control group, half of each second grade class was selected by a random procedure for participation in the creative dramatics intervention program. In practice, this meant that the alphabetized roster of each intact class was employed such that the first child on the list was assigned to the treatment group and the second child to the control group, etc. The mean scores in Table 1 indicate that there was no significant difference between the two groups in intelligence or reading comprehension.

Letters were sent to all second grade parents explaining the purpose of the study (see Appendix A). All except one parent returned a form granting permission for their child to participate in the creative dramatics program (if selected) and the reading and narrative language tasks.

Treatment

The students met with the writer throughout the treatment period in 3 treatment groups that averaged 12 children, for 24 sessions of 30 minutes duration, over a

Table 1

Comparison of Mean Scores on Cognitive Abilities Test (Standard Age Score) and Gates-MacGinitie Reading Comprehension Test (pretest) for the Experimental and Control Groups

	Groups		
Test	Experimental (n = 37)	Control (n = 34)	t
C.A.T.			
Mean	102.4	103.8	.43(ns)
S.D.	13.1	14.2	
G - M			
Mean	58.9	59.2	.06(ns)
S.D.	19.8	18.8	

12 week period from February to May. The groups met in an empty remedial reading classroom or a quiet hallway. During these periods, the control groups remained in their own classrooms with their regular teachers, participating in special activities that varied among the teachers but included math, spelling and social studies games. The teachers had been directed not to permit dramatics or story-reading during this time, but were asked to provide enjoyable activities to offset the special effects of the treatment group participation.

The creative dramatics intervention program, or "treatment condition", included the following procedure. The first four creative dramatics sessions were introductory in nature, featuring sensory-motor, pantomime, and imagery activities which became the basis of beginning "warm-ups" in all the remaining sessions. These warm-ups encouraged the students to utilize their powers of concentration, observation and imagination (see Appendix B). The format following warm-ups included the reading of a story, usually a folk or fairy tale (see Appendix C); discussion; planning the dramatization; choosing "players" and "audience"; "playing" the story in part or as a whole; evaluating the performance; replaying the story with different children (so that everyone had an opportunity to act and

observe each period); and re-evaluation and discussion. The group discussed character motivation, as well as problem-identification and solution, and was encouraged to explore alternative solutions during some replaying activities. If time did not allow completion of all these activities, they were carried over to the next session. A sample lesson is provided in Appendix B.

Performance Measures

The effects of the creative dramatics treatment program were measured according to three criteria: reading comprehension on standardized test passages, reading performance on an informal cloze test, and narrative language performance on a story retelling/invention task.

Standardized Reading Test

Reading comprehension performance was measured by the Gates-MacGinitie Reading Test (1978), Level B, Form 2, a group test of silent reading lasting 35 minutes. It consisted of 40 items ranging in length from 1-4 sentences and from simple to complex structure. After reading each passage, the student selected one out of four pictures as a correct answer in a multiple choice format. This test, routinely administered by the school in the fall, was used as a pretest and the same form was administered again in May as a posttest. The Kuder-

Richardson Formula 20 reliability coefficient computed from the standardization sample reported for this test was .92 (split-half reliability) and .81 (alternate form reliability). Concurrent validity was reported at .79 to .80 with four other standardized reading comprehension tests for grades 3 and 5. Construct validity for the primary grades was based upon the skills and objectives of various basal reading programs.

Informal Cloze Reading Procedure

Reading performance was also measured by an informal cloze reading procedure in which an entire story from a book of folk tales of second grade readability level (Dolch, 1952) was transcribed with every tenth word deleted. The story, "The Little Red Hen and the Fox", was unfamiliar to the children and not used in the experimental setting. It was felt that the cloze procedure would be more sensitive to the language, thought, predictability and prior knowledge addressed in the reading defintion operative in this study than the standardized reading comprehension test also administered.

The writer administered the cloze test in each second grade classroom. The following sentence was written on the board:

I like_____.

Each class then volunteered missing words. They were told the answer could only be one word long and had to make sense. Responses included: gum, candy, T.V., swimming, Bobby, etc., and all were acceptable. It was demonstrated that there was no single right answer.

A second sentence was then written after the first:

It tastes_____.

Acceptable responses included: good, delicious, sweet. Here it was demonstrated that the second sentence modified the meaning of the first (i.e., Bobby, swimming and T.V. do not taste good and therefore would not make sense when the two sentences were combined).

Test booklets were then distributed with a practice paragraph on the first page (see Appendix D). This was the beginning of the folk tale, Three Little Pigs, (Dolch, 1951). The writer read the entire passage aloud, saying, "blank" at each deletion, while the students read along silently. The children were then instructed to re-read the passage and write their responses in the blank spaces. They were directed to "sound out" words they could not spell. Then they were reminded there could be only one word in a space, and it had to make sense in the story. After five minutes, the passage was reviewed sentence-by-sentence with the children volunteering their answers. All responses that

were semantically and syntactically correct were acceptable. This training task lasted about 20 minutes.

After a "stretch break", the children were asked to turn to the next page and read the story, "The Little Red Hen and the Fox," silently, one paragraph at a time, and fill in the blanks (See Appendix D). If they could not determine an answer, they were to read the next sentence and see if that helped, or leave it blank and continue. They were to raise their hand if they needed help, and the writer and their classroom teacher circulated to help them. The teachers could neither help with reading nor provide answers but encouraged students to continue. In some instances, when children blocked because they could not spell a response, they whispered it to the teacher who wrote the response down.

The test was four pages long and untimed. Most children finished within a half hour, but some slower readers, who insisted on completing the story, took as long as 45 minutes. (All the children were highly motivated to persevere.) When students finished, they read or drew at their desks and their booklets were collected. The training and test administration took approximately one hour.

The cloze procedure was scored two ways: the number correct out of 39 possible responses that were

exact (verbatim) and the number of exact responses combined with the number that were semantically and syntactically acceptable substitutions (synonymic).

The writer scored all the tests, referring to the original story for verbatim responses. A second person (who was also a teacher) then scored all the tests to see whether there was any disagreement. The level of agreement was 100% for exact responses and .88 for synonymic responses (calculated by the ratio of the number of agreements to the number of agreements and disagreements). Instances of disagreement over synonymic responses were resolved by a strict interpretation of the author's meaning.

Narrative Language Performance Measure

Subject Pretraining. In order to familiarize the children with the general procedures to be followed, an informal session was arranged in which each second grader told a first grader or kindergartener a story about a picture book selected from the library. Second graders were told not to read, but to make up a story so that their teachers could find out what kinds of stories the younger children liked.

The writer visited each kindergarten, first and second grade classroom before and during the story-telling task in order to give directions, encourage the

story-tellers, question the listeners about whether or not they liked the story, and observe.

The Pretest Task. The week after the informal story-telling session, pretest language samples were elicited from all second graders within a five day period using a story-retelling and invention task. The book, The Flying Hockey Stick, (Bradfield, 1966) was employed for the following reasons. The story and illustrations were known to be particularly appealing to children, but it was a book not widely read by parents or teachers and therefore unknown to most of the children. (Two children, who acknowledged having read it before, recorded a story but were not included in the subsequent analysis.) In order to prevent rehearsal between pretest and posttest language tasks, both the school and public librarians agreed to remove the book from circulation for the school year.

The story followed many conventions of folk tales in theme and structure.It had a logical half-way point which facilitated the split task of story retelling and story invention. The story met the criterion of the study by John et al. (1970); i.e., story construction was simple, but not so simple that it could be memorized verbatim. To insure that subjects could only base their stories on pictures and a standard narrative, all the

words in the book were masked. The writer tape-recorded directions (see Appendix E) and the text of the first half of the story. Thus there was a single standard version of the story told by an adult whose voice was familiar.

Experimenter Assistants. Three assistants were trained in the language elicitation procedure. All were mothers of children not in the sample, and were former teachers. In addition to training, directions were posted for their reference (see Appendix F) in the experimental setting. These assistants did all the language elicitation for both the pretest and posttest except for the first morning when the writer worked with subjects in order to identify and eliminate any areas of difficulty in the procedure.

The Language Elicitation. The writer went to each classroom before the pretesting began to explain the story-telling task. The purported reason for the task was to help a book publisher who wanted to know what kind of stories first graders and kindergarteners liked. It was emphasized that all the second graders would tell a story, not read it.

A small, pleasant room usually reserved for work with learning disabled children was utilized for the

language testing. This room had the advantage of being screened from corridor noise by an anteroom which was also a convenient place for subjects to await their turn. A master list was compiled of all second graders and children in first grade and kindergarten who were to serve as listeners. Two paraprofessionals and two sixth graders were instructed by the writer to pick up and deliver all participants one at a time, emphasizing friendliness, putting children at ease, and encouraging anyone who had to wait a few minutes to read or play with a puzzle.

Each second grade subject was brought to the testing room by an aide and introduced to the research assistant. The latter put the child at ease and asked her/him to sit down at a long table on which lay The Flying Hockey Stick, closed, and two cassette tape recorders with built-in microphones and pause controls. The table was against a blank wall, thereby restricting distractors for those facing the wall. The assistant sat down next to the wall and started one tape recorder which played the directions for the storyteller (Appendix E).

The directions repeated what the children had been told in their classrooms about the purpose of the task. They were then told to open the book and look at the

pictures while listening to the tape carefully, because they were going to retell the story they heard to a younger child. The story was then played on the same tape and the assistant turned the pages at the appropriate pause. Many subjects did this themselves, but were prevented from turning the pages too soon. When the story reached the half-way point (page 16), narration ceased and the tape informed the subjects that from this point on, they were to look at the pictures in the remaining half of the book and make up an original ending to the story. When this was done, they could look at the whole book again and get ready to tell the entire story to a younger child. The tape was then rewound while the assistant asked whether there were any questions. This total procedure took about ten minutes. The subject was then allowed no more than five minutes (measured by a concealed stopwatch) to look at the second part of the book and prepare the story. During this time, the assistant checked on whether the audience was waiting in the anteroom.

At the end of five minutes, the listener was brought into the testing room, introduced, and seated next to the subject. The assistant read the directions for the listener (Appendix G), reiterating the purpose of the task and asking the listener not to say anything

until the end of the story. The recording tape was then activated on the second machine (the assistant noting the names and tape numbers on the tape and a master list), and the subject was asked to tell the story. At this point, the assistant moved her chair back behind the two children in order to be unobtrusive, but still in a position to monitor the cassette recorder and be sure no pages were skipped. If a school bell or other distraction occurred, taping was temporarily stopped and then resumed.

Because research literature suggests children may block on such a task, the research assistants were directed to ask the storyteller, "Do you want to tell anything about this picture?" in the event blocking occurred. When the subject finished, she or he was asked, "Is that the end of your story?" if there was no apparent or formal ending. The storyteller was enthusiastically complimented by the assistant who then asked how the listener liked the story. Both children were then thanked and escorted back to their classrooms by an aide while the next subject was brought into the testing room and the process repeated. The taped stories were later transcribed for analysis.

Narrative Language Measurement Categories

Narrative language performance was measured by the

story retelling/invention task described above. Each child's story was taped, transcribed and segmented into the categories described below. A count was then made of the incidence of each category in part 1 (story retelling) and part 2 (story invention).

Number of Communication Units (C.U.). A communication unit is a grammatical, meaningful independent clause with all of its modifiers; an utterance whose meaning is partially determined by the speaker's use of pitch, stress and juncture. Two examples follow:

Ex.1: Barnaby zoomed up in the air (1 CU)

Ex.2: He took a hockey stick, his mother's umbrella, an electric fan, and an extension cord, and taped them all together (1 CU)

Communication units were further defined according to the following subdivisions and counted only according to the subdivision category:

1. Number of Picture-Dependent Communication Units (PDU)

   a. Part 1 (retelling): A picture-dependent unit is a communication unit that is context-dependent; an utterance accurately recalled from the story that is also explicit in the picture; an utterance of concrete quality.

Ex: He got a hockey stick, a fan, and taped them together (1 PDU)

b. Part 2 (invention): A picture-dependent unit is a communication unit that is invented, not recalled, and provides a description of what is explicitly happening in the picture.

Ex: There was a man in the water (1 PDU)

2. Number of Picture-Independent Communication Units (PIU)

a. Part 1 (retelling): A picture-independent unit is a communication unit that is accurately recalled from the story and is not explicit in the picture; an utterance of an abstract quality.

Ex: He finally thought of an idea (1 PIU)

b..Part 2 (invention): A picture-independent unit is a communication unit not recalled from the story that contains elements not explicit in the picture. It is based upon inference about what is happening in the picture.

Ex: They saw a captain in the water (1 PIU)
(The picture shows a man in a green uniform in the water.)

3. Number of Original Communication Units (OCU)

a. Part 1 (retelling): An original communication

unit is one that presents a relevant elaboration. It is an utterance that introduces an element, event, or dialogue not present in the story that was heard, but not contrary to the story or illustration.

Ex: His mother gave him a peanut butter and jelly sandwich (1 OCU)

(The story says peanut butter, but not jelly. The sandwich is in a sack so the ingredients cannot be seen.)

b. Part 2 (invention): An original communication unit is the invention of a relevant element, event or dialogue not depicted in the picture.

Ex: They saw a captain of a boat that sank (1 OCU)

(The picture shows a man in uniform in the ocean who is holding onto a board and waving.)

4. Number of Inaccurate Communication Units (X)

a. Part 1: An inaccurate communication unit is one that contains an error in recall of the story. It may or may not be explicit in the picture.

Ex. 1: He saw a girl in a building (1 X)

(The story says an old lady, and she is

in the picture.)

Ex. 2: His mother made him a cheese sandwich (1 X)

(The story says a peanut butter sandwich, but you cannot see the ingredients.)

b. Part 2: An inaccurate communication unit is an invention that is inconsistent with the story or picture.

Ex. So they flew home on the broomstick (1 X)

(The story says hockeystick and it is in the picture.)

Number of Fragments (F). A fragment is a word or phrase that has meaning in the story but is not a complete communication unit or a maze. It may be a label of a picture.

Ex: A walrus... a whale (2 F)

(There are two pictures. One shows a walrus on a rock, and the other shows a whale in the ocean.)

Number of Comments (C). A comment is a communication unit or fragment in which the storyteller breaks away from the story in order to address the listener, or to make editorial asides to the listener or

himself. It is a meaningful utterance that is not part of the story proper.

Ex: They saw a pink whale. A pink whale? That's weird! (1 PDU, 2C)

Number of Mazes (M). A maze is a false start, hesitation, filler, correction, or repetition (that is not for emphasis). Although it may represent a striving for meaning, it contributes nothing to the narrative.

Ex: So the boy... so the woman... so Barnaby and the old woman... uh... flew away (1 PDU, 3 M)

Number of Story Language Phrases (SL). A story language phrase is a novel phrase recalled from Part 1 of the story which is incorporated in Part 2 (i.e., figurative language, proper whole names, story patterns). It may also include a formal beginning or ending not heard in the story. It may be part of a communication unit or fragment, and is the only category that is assigned along with another category.

Ex.1: He couldn't believe his eyes, but he got on the hockeystick. (1 PIU, 1 SL, 1 PDU)

Ex.2: Barnaby Jones flew up high. (1 PDU, 1 SL)

Ex.3: Switching the fan to fast, he zoomed

away. (1 PIU, 2 SL)

For purposes of statistical analysis, several additional categories were defined and derived from the language measurement segmentation described here. They included:

Total Language. Total language is the sum of all words spoken in all categories combined.

Number of Meaningful Utterances. The number of meaningful utterances is the sum of all communication units and fragments.

Mean Length of Utterance. Mean length of utterance is the ratio of the total number of words in communication units and fragments to the total number of communication units and fragments.

Percentage of Total Language in Communication Units. This is the ratio of the number of words used in all communication units to total language

Percentage of Picture-Dependent Communication Units. This is the ratio of the number of picture-dependent units to the sum of picture-dependent units and picture-independent units.

For each of the following language measures, improvement over time was defined as an increase in production: total language, number of meaningful utterances, mean length of utterance, number of story

language phrases, number of original communication units and percentage of all words in communication units.

For the remaining language measures improvement was defined as a decrease in incidence over time: number of inaccurate communication units, number of picture-dependent units, mazes, fragments and comments. It was predicted that both groups would improve in all categories, but the experimental group would show significantly greater gains.

All categories were mutually exclusive except for Story Language. When the incidence of more than one category occurred in a single communication unit, the following hierarchy was observed:

1. X Any inaccuracy in a communication unit made it wrong.
2. O Any original element in a communication unit made it original, and not picture-dependent or independent.
3. I Any inference in a communication unit made it picture-independent, and not picture-dependent.
4. P Any context dependence in a communication unit containing none of the above, made it a picture-dependent unit.

To summarize, inaccuracy overrode all other

categories. Then, in communication units that were accurate, originality, picture-independence, and picture-dependence were considered to be cognitively demanding in descending order.

These categories comprised the basis for the analysis of the narrative language raw data. Scoring procedures will be discussed below.

Narrative Language Scoring Procedures

All of the narrative language recordings were transcribed by one person. The writer removed the transcripts of nine subjects who were pretested but lost to the study and not posttested. Those transcripts were duplicated and used for training purposes. The remaining 71 subjects were assigned a number between 1 and 71 which was used to identify both their stories and reading tests.

Three scorers, all experienced teachers at the elementary or college level, met individually with the writer twice. During the first session, the scoring procedures were discussed (see Appendix H) as they pertained to two sample protocols already scored by the writer. Then each scorer analyzed an unscored transcript independently, while listening to the child's taped story, and referring to the book, The Flying Hockey Stick. The scorers wrote comments on separate paper, and

scores and comments were discussed and compared with an analysis of the same story which the writer had done earlier. The session lasted approximately two hours. This procedure was repeated with all three scorers, and items that had been discussed were employed to further refine the scoring procedure.

Each scorer then attended a second training session individually. Clarifications of modified directions were discussed as they pertained to a different protocol prescored by the writer. Next, each scorer analyzed a copy of a new transcript, independently, while referring to the book and tape. Again, each analysis was compared with one done earlier by the writer. If disagreements persisted after discussion, the author made the final decision. After the second session had been conducted, the writer was satisfied that the number of disagreements were rare enough that no further training was necessary (there was at least 80% agreement with the writer on each language category).

The 71 pretest stories were then distributed among four scorers (the author was the fourth) such that the first scorer received story 1,5,9, etc. and the second scorer received story 2,6,10, etc. Three scorers analyzed 18 stories, and one scorer (the writer) analyzed 17. After the 71 pretests had been scored for

language production, the same scorers analyzed the 71 posttests which were distributed in the same manner.

The refinement of communication units into subcategories took the most time both in training and actual scoring. Each scorer had to replay each segment of tape to be certain of where terminal pauses occurred for utterances. The text for the first part of the story had to be referred to for Part 1 (recall) in order to determine accuracy, picture-dependence, picture-independence, and originality. Therefore, Part 1 took longer to score. Once the scorers were familiar with the procedure, and depending on the length and complexity of each story, they averaged about 20 minutes per transcript. Besides the directions in Appendix H, each scorer had a detailed list of the definitions and examples for each category described above under Narrative Language and Scoring Procedure.

Interscorer Reliability

In order to determine the reliability of the scoring procedures for the language measurement, on the advice of a statistical consultant, a sample of the scored protocols was randomly drawn and submitted to four outside judges. The four judges were all teachers at the elementary and secondary level who had volunteered to cooperate because of interest in the

project. The four judges were trained individually by the writer in the scoring procedure for the narrative language measure discussed above. They were trained the same way as the original scorers.

Each transcript was assigned a number from 1-71. Then 12 were selected from the pretests, and another 12 from the posttests, using a table of random numbers. The same 24 protocols (17% of the total number) were analyzed by each judge for agreement or disagreement with the original scorer in the assignment and count of categories (not word counts).

Because some studies (McCarthy, 1930, 1954; Shriner, 1967) have found that complexity increases after the first ten utterances during language elicitation (for discrete stimuli), judges were directed to enter each transcript at the eleventh utterance and then analyze the next 25 utterances. For most stories this included utterances in Part 1 (recall) and Part 2 (invention).

For long stories, judges entered the transcript at the 15th utterance and analyzed the next 25. That guaranteed a sample of language in both Part 1 and Part 2, since the mean number of communication units for Part 1 was 28.9 in the pretest, and 22 in Part 2 (with a range of 0-48 and 9-48, respectively). Not all subjects

had enough utterances to examine in that way, but this problem did not arise in the random sampling of transcripts that were judged. Judges then recorded on separate paper the number of times they agreed or disagreed with the scorers of the 24 protocols in each of the eight language categories.

Interjudge agreement was calculated according to the percentage of agreements between judges. The ratio of the number of agreements to the total number of decisions (agreements and disagreements) yielded the following percentages for each language measurement of interest:

Mazes: .89

Fragments: .96

Comments: .96

Story Language: .86

Picture-Dependent C.U.: .95

Picture-Independent C.U.: .91

Original C.U.: .92

Inaccurate C.U.: .96

The reliability of the scoring procedure was therefore considered acceptable.

CHAPTER FOUR

Results

In order to test the general hypothesis that creative dramatics enhances reading and language/thought skill and performance, a number of preconditions and assumptions were first examined. Thus, three questions about the equivalence of the experimental and control groups are addressed in the first section of this chapter. In the second section, specific hypotheses about reading and language/thought are tested using analysis of covariance and analysis of variance with repeated measures.

The experimental and control groups were originally planned to be of equal size, 40 in each group. However, during the course of the semester, a number of children were lost to the study because they moved or missed the posttest time period for various reasons. Therefore, the final group sizes were 37 and 34 for experimental and control, respectively. With respect to sex and age there were no significant differences between the two groups.

The more significant question of equivalence

between the two groups involved their relative intelligence and pretest reading scores. There were no significant differences between the two groups in intelligence as measured by the Cognitive Abilities Test standard age scores (see Table 1). There were no significant differences in pretest reading comprehension as measured by standard scores on the Gates-MacGinitie Reading Test (see Table 1). Since equivalence could not be determined prior to treatment, a covariance design was employed to test the hypotheses. The Cognitive Abilities Test was the covariate for the standardized reading test, and the Gates-MacGinitie Reading Test was the covariate for the language and cloze measures.

Hypotheses Tested

I. There is no significant difference in reading comprehension between the experimental and control groups on a standardized reading test.

The mean scores were 60.3 and 63.9 for the experimental and control groups, respectively (see Tables 2 and 3). An analysis of covariance and an analysis of variance with repeated measures were employed (see Table 4). The Group X Time interaction shows there was no significant effect for the experimental treatment over time: $F(1, 65) = 2.10$, $p > .05$. The null hypothesis cannot be rejected. Intelligence was the covariate.

Table 2
Mean Performance Scores of Experimental Group

Variable	Mean		SD		Adjusted Mean	
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
Reading						
Gates-MacGinitie	58.90	63.75	19.8	20.12	59.79	60.28
Cloze		31.83		6.90		32.00
Language						
Total Number of Words						
Part 1	259.15	308.68	92.05	74.06	260.18	309.71
Part 2	182.50	216.19	76.09	73.95	183.52	217.21
Number of Meaningful Utterances						
Part 1	29.77	32.58	9.27	6.82	29.85	32.67
Part 2	23.07	25.85	7.69	8.01	23.16	25.94
Mean Length of Utterance						
Part 1	8.68	9.47	0.99	1.31	8.69	9.49
Part 2	7.89	8.27	1.31	1.34	7.89	8.27
Number of Mazes						
Part 1	6.41	8.91	4.61	3.94	6.39	8.90
Part 2	4.85	7.05	4.54	4.25	4.84	7.04

Table 2 (continued)
Mean Performance Scores of Experimental Group

Variable	Mean		SD		Adjusted M	
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
Number of Original Communication Units						
Part 1	2.09	3.48	1.84	2.26	2.12	3.51
Part 2	3.16	7.12	3.38	5.16	3.18	7.15
Number of Story Language Units						
Part 2	5.26	7.26	3.47	4.60	5.29	7.27
Percent of Words in Communication Units						
Part 1	.94	.94	.03	.03	.94	.94
Part 2	.94	.94	.05	.04	.94	.94
Percent of Picture Dependent Units						
Part 1	.59	.59	.12	.08	.59	.59
Part 2	.58	.59	.12	.11	.58	.59

Table 3
Mean Performance Scores of Control Group

Variable	Mean		SD		Adjusted Mean	
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
Reading						
Gates-MacGinitie	59.20	59.43	18.81	18.89	59.23	63.92
Cloze		32.37		6.97		32.40
Language						
Total Number of Words						
Part 1	255.85	305.74	72.36	70.81	256.57	306.46
Part 2	182.04	208.56	72.44	79.61	182.76	209.28
Number of Meaningful Utterances						
Part 1	27.83	31.30	6.87	6.12	27.89	31.36
Part 2	21.99	24.68	7.51	8.11	22.05	24.74
Mean Length of Utterance						
Part 1	9.23	9.81	1.30	1.38	9.23	9.81
Part 2	8.19	8.44	1.23	1.54	8.19	8.44
Number of Mazes						
Part 1	7.89	11.26	6.20	5.91	7.89	11.26
Part 2	6.21	6.32	4.60	3.44	6.20	6.32

Table 3 (continued)
Mean Performance Scores of Control Group

Variable	Mean		SD		Adjusted Mean	
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
Number of Original Communication Units						
Part 1	1.04	1.48	1.56	1.47	1.05	1.50
Part 2	2.65	5.69	2.58	4.68	2.67	5.70
Number of Story Language Units						
Part 2	4.90	6.89	3.16	3.75	4.92	6.91
Percent of Words in Communication Units						
Part 1	.93	.93	.05	.05	.93	.93
Part 2	.92	.94	.06	.03	.92	.94
Percent of Picture-Dependent Units						
Part 1	.57	.55	.11	.08	.57	.55
Part 2	.63	.60	.09	.13	.63	.60

Table 4

Analysis of Variance and Covariance with Repeated Measures for Gates-MacGinitie Reading Test

Source	SS	df	MS	F
Mean	3.16464	1	3.16464	0.01
Class	2128.57519	2	1064.28760	2.09
Group	76.09052	1	76.09052	0.15
Class X Group	19.18484	2	9.59242	0.02
C.A.T. 1st Covariate	17087.11622	2	17087.11622	33.57**
Error	32575.02899	64	508.98483	
Time	221.43912	1	221.43912	3.22
Time X Class	439.47538	2	219.73769	3.20*
Time X Group	144.64601	1	144.64601	2.10
Time X Class X Group	46.68423	2	23.34212	0.34
Error	4470.11973	65	68.77107	

** P<.001 * P<.05

II. There is no significant difference in reading comprehension between the experimental and control groups on an informal Cloze reading procedure.

This procedure was a posttest measure only and was originally calculated two ways: verbatim (exact) and synonymic (exact plus acceptable substitutions). Only synonymic scores were used. Raw scores (number correct out of 39 items) were analyzed. The mean scores for Cloze for the experimental and control group were 32.0 and 32.4, respectively (see Tables 2 and 3). There was no significant difference between the two groups in reading comprehension on the cloze task: $F(1,64) = .11$, $p > .05$ (see Table 5). The null hypothesis cannot be rejected. The Gates-MacGinitie reading pretest was the covariate.

III. There is no significant difference in various measures of narrative language performance between the experimental and control groups.

Subjects were given a story-retelling and story invention task. Using the Gates-MacGinitie reading pretest as the covariate for all language measures, an analysis of variance and covariance with repeated measures was employed for the following dependent variables:

Table 5

Summary Table for Cloze Reading Test

Source	SS	df	MS	F
Mean	1853.16765	1	1853.16765	53.39
Teacher	168.33847	2	84.16923	2.42
Group	3.97298	1	3.97298	0.11
Class x Group	45.55492	2	33.77746	0.66
Reading pretest 1st Covariate	1985.13454	1	1985.13454	57.19**
Error	2221.62178	64	34.71284	

** P<.001 * P<.05

1. Total Language (total number of words spoken)

The mean scores for this measure (see Table 2) for the experimental group on the pretest and posttest, respectively, were 260.18 and 309.71 in Part 1 (recall); and 183.52 and 217.21 in Part 2 (invention). The means for the control group on the pretest and posttest, respectively (see Table 3), were 256.57 and 306.46 in Part 1 (recall); and 182.76 and 209.28 in Part 2 (invention). In Table 6, the Group x Time interaction shows there was no significant effect for the experimental treatment over time: $F(1, 65) = .05$, $p > .05$. The null hypothesis cannot be rejected. Significant main effects for total language production were the reading pretest covariate: $F(1, 64) = 12.58$, $p < .001$); Time: $F(1, 65) = 25.75$, $p < .001$); and Part: $F(1, 65) = 249.17$, $p < .05$. There was a significant interaction for Time x Part: $F(1, 65) = 4.71$, $p < .05$ (see Figure 1).

More language was used in the first part, story recall, than the second part, story invention. Apparently, the recall of an existing story in the presence of picture cues (Part 1) stimulated more word production than did pictures alone (Part 2). In addition, there was a greater increase from the pretest to posttest for Part 1 than Part 2.

Table 6

Summary Table of F Values Obtained for Total Language and Meaningful Utterances

Source	Variable 1 Total Language F	Variable 2 Number of Meaningful Utterances F
Mean	51.40	90.40
Class	0.97	0.16
Group	0.07	1.03
Class x Group	1.42	0.97
Reading pretest 1st Covariate	12.58**	11.12**
Time	25.75**	10.77**
Time x Class	1.04	0.20
Time x Group	0.05	0.03
Time x Class x Group	1.14	1.08
Part	249.17**	123.27**
Part x Class	10.28*	3.42*
Part x Group	0.01	0.17
Part x Class x Group	0.28	0.05
Time x Part	4.71*	0.15
Time x Part x Class	0.04	0.19
Time x Part x Group	0.17	0.12
Time x Part x Class x Group	1.51	1.53

** P<.001 * P<.05

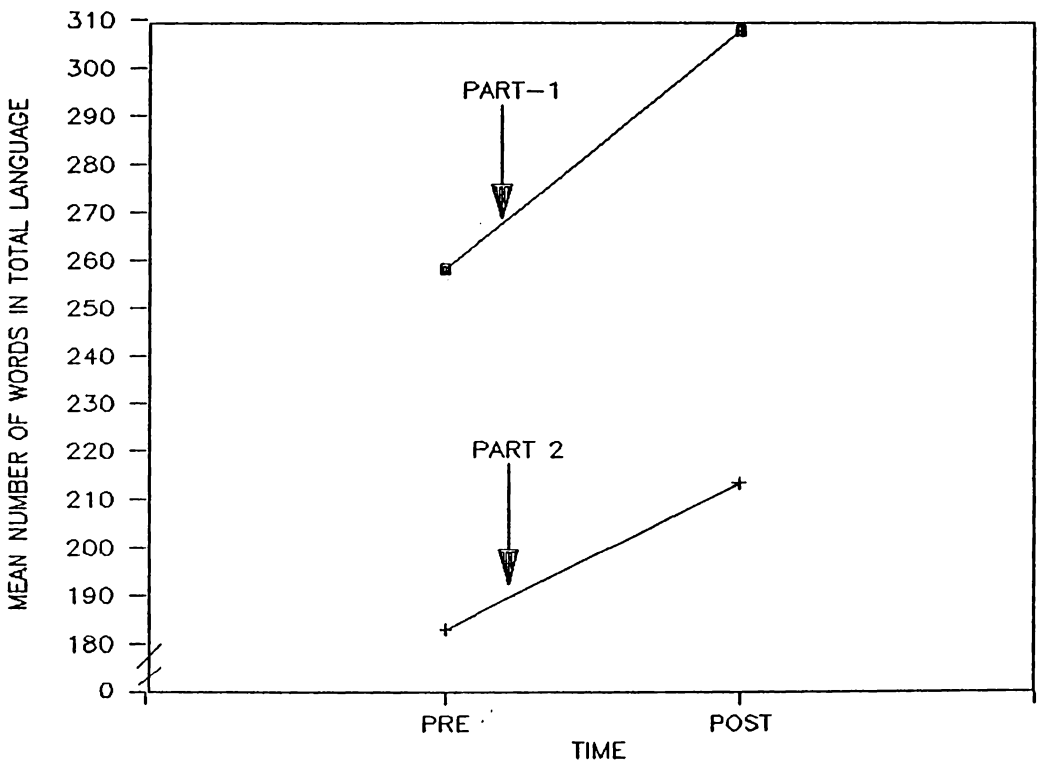

Figure 1. — Time X part interaction for number of words in total language.

2. Total Number of Meaningful Utterances (all communication units and fragments)

The mean scores for this measure for the experimental group for the pretest and posttest, respectively (see Table 2), were 29.85 and 32.67 in Part 1 (recall); and 23.16 and 25.94 in Part 2 (invention). The means for the control group (see Table 3) were 27.89 and 31.36 in Part 1; and 22.05 and 24.74 in Part 2. In Table 6, the Group X Time interaction shows there was no significant effect for the experimental treatment over time: $F(1, 65) = .03$, $p > .05$. Therefore, the null hypothesis could not be rejected. Significant main effects again included the reading covariate: $F(1, 64) = 11.12$, $p < .001$; Time: $F(1, 65) = 10.77$, $p < .001$; and Part: $F(1, 65) = 123.27$, $p < .001$.

Both groups increased over time in the production of meaningful utterances in their stories, and the amount in Part 1 (story recall) exceeded Part 2 (story invention). These results are similar to that of Total Language.

3. Mean Length of Utterance (the ratio of the total number of words in communication units and fragments to the number of communication units and fragments)

The mean scores for this measure for the

experimental group (see Table 2) for the pretest and posttest, respectively, were 8.69 and 9.49 in Part 1 (recall); and 7.89 and 8.27 in Part 2 (invention). The means for the control group (see Table 3) were 9.23 and 9.81 in Part 1; and 8.19 and 8.44 in Part 2. The Group x Time interaction (see Table 7) shows there was no significant effect for the experimental treatment over time; $F(1, 64) = .26$, $p > .05$. The null hypothesis could not be rejected. Again, the significant main effects on this measure were the reading covariate: $F(1, 63) = 3.38$, $p < .001$; Time: $F(1,64) = 10.59$, $p < .001$; and Part: $F(1, 65) = 65.12$, $p < .001$.

4. Total Number of Mazes (repetitions, fillers, corrections, hesitations and false starts that contribute no meaning to the narrative)

The mean scores for this measure for the experimental group (see Table 2) for the pretest and posttest, respectively, were 6.39 and 8.90 in Part 1 (recall); and 4.84 and 7.04 in Part 2 (invention). The mean scores for the control group were 7.89 and 11.26 in Part 1; and 6.20 and 6.32 in Part 2. The Group x Time interaction (see Table 7) shows there was no significant effect for the experimental treatment over time: $F(1, 65) = .32$, $p > .05$. The null hypothesis cannot be rejected. Significant main effects were Time: $F(1, 65)$

Table 7

Summary Table of F Values Obtained for Mean Length of Utterance and Number of Mazes

Source	Variable 3 Mean Length of Utterance	Variable 4 Number of Mazes
Mean	553.59	35.04
Class	2.00	2.91*
Group	2.32	1.61
Class X Group	0.35	1.13
Reading pretest 1st Covariate	3.38**	0.35
Time	10.59*	11.61**
Time X Class	1.63	5.17*
Time X Group	0.26	0.32
Time X Class X Group	0.05	0.77
Part	65.12**	35.38**
Part X Teacher	1.38	0.99
Part X Group	0.59	3.62
Part X Teacher X Group	0.30	1.31
Time X Part	2.68	5.54*
Time X Part X Class	0.83	1.47
Time X Part X Group	0.03	3.82*
Time X Part X Class X Group	0.41	0.41

** P <.001 *P <.05

= 11.61, $p < .001$; and Part: $F(1, 65) = 35.38$, $p < .001$. There was a significant interaction for Time x Class: $F(2, 65) = 5.17$, $p < .05$; Time x Part: $F(1, 65) = 5.54$, $p < .05$); and Time x Part x Group: $F(1, 65) = 3.82$, $p < .05$ (see Figure 2).

Both groups increased over time in the incidence of mazes. This was an unexpected outcome (see Chapter 2). It was predicted that the number of mazes would decrease for both groups in both parts of the story. It was expected that experience in creative dramatics would facilitate attentiveness and recall in Part 1 and ability to compose a fluent story in Part 2. As in the other language variables measured, the quantity of mazes was greater on Part one (recall) than Part two (invention). However, the number of mazes increased unexpectedly over time for both groups. The control group appeared to have more difficulty retelling the story fluently (Part 1) on the posttest than on the pretest, but increased very little over time on Part 2. The experimental group appeared less fluent on the posttest than the pretest in both recall and invention.

5. Number of Original Communication Units (communication units that contain elaboration, action, events, or dialogue relevant to the story but not present in the picture or text)

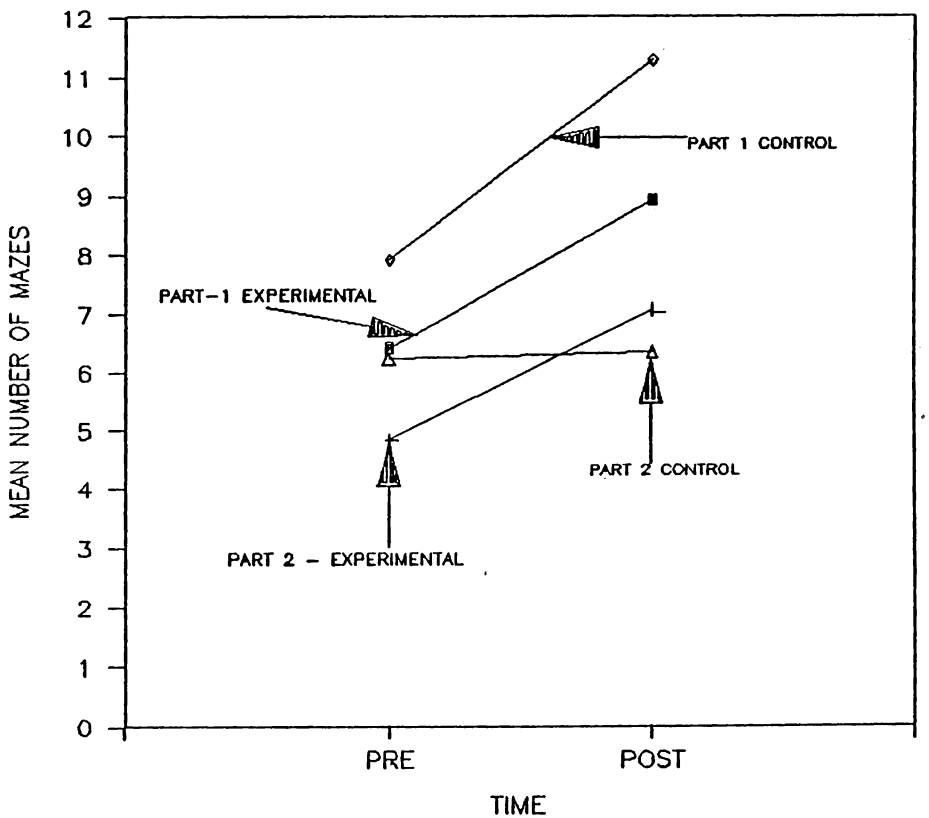

Figure 2. - Time X part X group interaction for mazes.

The mean scores for this measure for the experimental group for the pretest and posttest, respectively (see Table 2) were 2.12 and 3.51 in Part 1 (recall); and 3.18 and 7.15 in Part 2 (invention). The mean scores for the control group (see Table 3) were 1.05 and 1.50 in Part 1; and 2.67 and 5.70 in Part 2. The Group x Time interaction shows there was no significant effect for the experimental treatment over time: $F(1, 65) = 1.56$, $p > .05$ (see Table 8). Therefore, the null hypothesis cannot be rejected. Significant main effects were the reading covariate: $F(1, 64) = 5.54$, $p < .05$; Time: $F(1, 65) = 34.24$, $p < .001$; and Part: $F(1, 65) = 43.44$, $p < .001$). There was a significant interaction for Time x Part: $F(1, 65) = 15.10$, $p < .001$ (see Figure 3). Both groups increased over time in the production of original communication units in Part 1 (story recall) and Part 2 (story invention). There was a greater incidence of originality in Part 2 (story invention) than part 1 (story recall) for both groups.

6. Story Language (the use of story convention and/or language heard in Part 1 (recall) that is incorporated in Part 2 (invention)

Story language was measured for Part 2 only. The mean scores for this measure for the experimental group for the pretest and posttest, respectively (see

Table 8

Summary Table of F Values Obtained for Original and Story Language Units

Source	Variable 5 Number of Original Communication Units	Variable 6 Number of Story Language Units
Mean	2.54	8.14
Class	0.28	0.67
Group	5.03*	0.22
Class x Group	2.30	8.07*
Reading pretest 1st Covariate	5.54*	4.77*
Time	34.24**	16.33**
Time x Class	2.11	0.13
Time x Group	1.56	0.00
Time x Class x Group	2.82	2.76
Part	43.44**	
Part x Class	0.15	
Part x Group	0.50	
Part x Class x Group	1.37	
Time x Part	15.10**	
Time x Part x Class	0.51	
Time x Part x Group	0.00	
Time x Part x Class x Group	1.11	

** P<.001 * P<.05

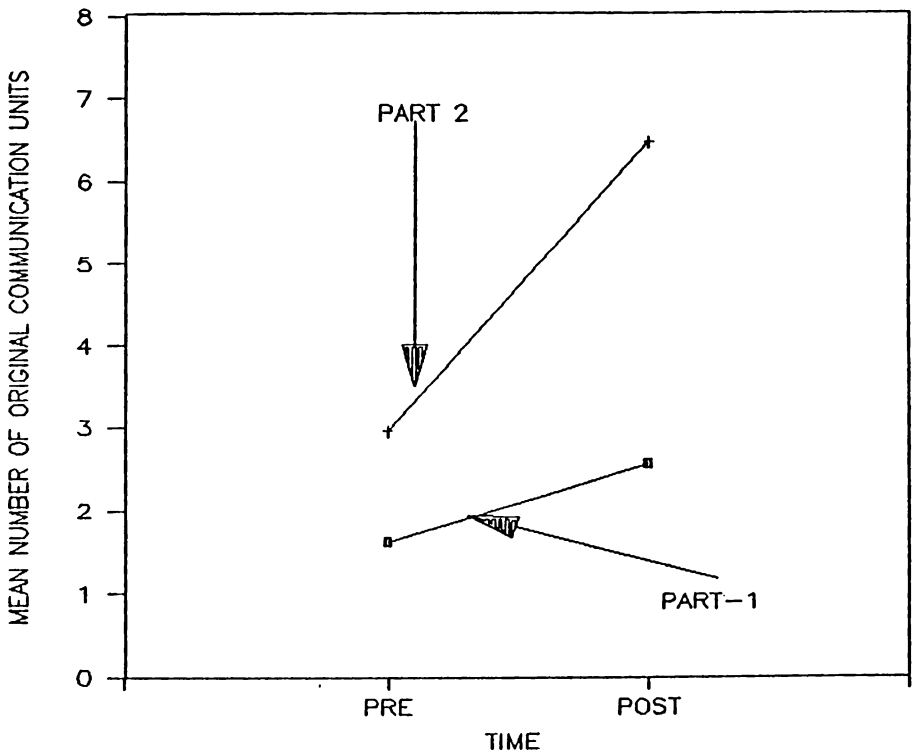

Figure 3. – Time X part interaction for original communication units.

Table 2), were 5.29 and 7.27 in Part 2 (recall). The mean scores for the control group (see Table 3) were 4.92 and 6.91. The Group x Time interaction shows there was no significant effect for the experimental treatment over time: $F(1, 65) = .00$, $p > .05$ (see Table 8). The null hypothesis cannot be rejected. A significant main effect was found for Time: $F(1, 65) = 16.33$, $p < .001$; and the reading covariate: $F(1, 64) = 4.77$, $p < .05$.

7. Percentage of Total Language in Communication Units (The ratio of the number of words used in all communication units to the total number of words)

The mean scores for this measure for the experimental group for the pretest and posttest, respectively (see Table 2), were .94 and .94 in Part 1 (recall); and .94 and .94 in Part 2 (invention). The mean scores for the control group (see Table 3) were .93 and .93 in Part 1; and .92 and .93 in Part 2. The Group x Time interaction shows there was no significant effect for the experimental treatment over time: $F(1, 64) = .94$, $p > .05$ (see Table 9). The null hypothesis is not rejected. There was a significant main effect for Class: $F(2, 64) = 3.17$, $p < .05$; and the reading covariate: $F(1, 63) = 8.19$, $p < .001$. A significant three-way interaction was observed for Time x Part x

Table 9

Summary Table of F Values Obtained for Percentage of Total Number of Words in C.U.

Source	F
Mean	5226.66
Class	3.17*
Group	2.81
Class X Group	1.40
Reading pretest 1st Covariate	8.19**
Time	0.05
Time X Class	3.19*
Time X Group	0.94
Time X Class X Group	0.09
Part	0.00
Part X Class	1.09
Part X Group	0.28
Part X Class X Group	2.00
Time X Part	2.45
Time X Part X Class	0.93
Time X Part X Group	4.79*
Time X Part X Class X Group	0.37

** P <.001 * P <.05

Group: $F(1, 64) = 4.79$, $p < .05$. This was an unexpected result (see Figure 4).

It had been predicted that the experimental group would exceed the control group on this measure on the posttest. Creative dramatics was expected to facilitate storytelling fluency in both parts of the task. That could have meant an increase in the number of communication units and/or their length, and a decrease of the incidence of mazes and fragments. However, the experimental group did not change at all in the percentage of all words used in communication units, while the control group decreased slightly in Part 1 and gained slightly in Part 2. This appears to be related to the increase in mazes for both groups.

8. Percentage of Picture-Dependent Communication Units (The ratio of the number of picture-dependent units to the combined numbers of picture-dependent and picture-independent communication units)

The mean scores for this measure for the experimental group for the pretest and posttest, respectively (see Table 2), were .59 and .59 in Part 1 (recall); and .58 and .59 in Part 2 (invention).The mean scores for the control group (see Table 3) were .57 and .55 in Part 1; and .63 and .60 in Part 2. The Group x Time interaction shows there was no significant effect

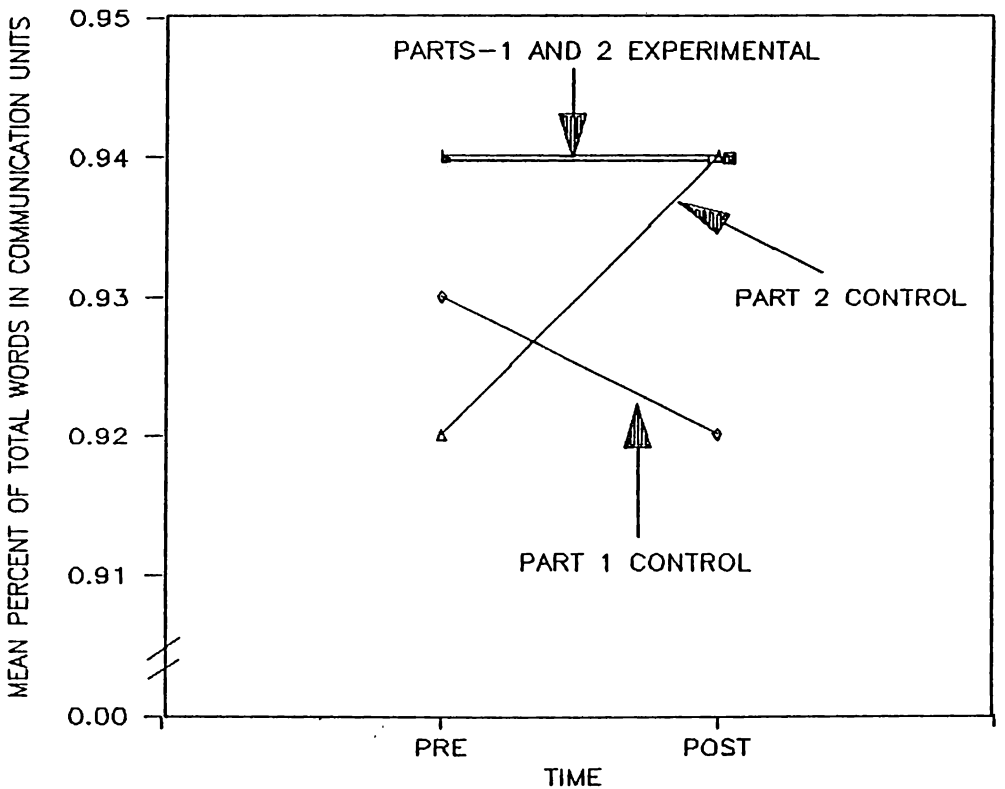

Figure 4. – Time X part X group interaction for percent of total language.

for the experimental treatment over time: $F(1, 64) = .94$, $p > .05$ (see Table 10). The null hypothesis could not be rejected. Main effects that were significant include: Class: $F(2, 64) = 3.15$, $p < .05$; Part: $F(1, 64) = 4.06$, $p < .05$; and the reading covariate: $F(1, 64) = 23.90$, $p < .001$. Further examination of these data reveals that in both groups the majority of communication units were picture-dependent in Part 1 and Part 2.

The last three language measures: fragments, comments and inaccuracies were rare events and were examined in less detail.

9. Number of Fragments (meaningful utterances related to the story that are not communication units; picture labels; holophrases)

The mean scores for this measure for the entire population of second graders on the pretest and posttest respectively, were .21 and .21 (see Table 11). The range was 0-2 in Part 1 on both the pretest and posttest. The range was 0-9 in Part 2 on the pretest, and 0-4 on the posttest. On Part 1 of the pretest, 87% of the total population (62/71 children) used no fragments, 8% (6/71) used one, 3% (2/71) used two, and one child used nine. This rare occurrence suggests that by second grade, most children are developmentally able

Table 10

Summary Table of F Values Obtained for Picture-Dependent Units

Source	F
Mean	873.14
Class	3.15*
Group	0.01
Class X Group	3.28*
Reading pretest 1st Covariate	23.90**
Time	0.97
Time X Class	0.35
Time X Group	0.94
Time X Class X Group	
Part	4.06*
Part X Class	0.82
Part X Group	5.53*
Part X Class X Group	2.26
Time X Part	0.18
Time X Part X Class	0.86
Time X Part X Group	0.05
Time X Part X Class X Group	0.99

** P <.001 * P <.05

Table 11

Range, Mean and Mode of Entire Population for Rare Occurrences: Number of Fragments, Comments and Inaccuracies

Variable	Pretest			Posttest		
	Range	Mean	Mode	Range	Mean	Mode
Fragments						
Part 1	0-2	.21	0	0-2	.21	0
Part 2	0-9	.26	0	0-4	.23	0
Comments						
Part 1	0-2	.11	0	0-3	.18	0
Part 2	0-10	.39	0	0-3	.11	0
Inaccurate C.U.						
Part 1	0-3	.42	0	0-2	.32	0
Part 2	0-3	.21	0	0-2	.07	0

to retell and invent a story in syntactically standard form in the presence of a picture cue.

10. Number of Comments (communication units or fragments in which the storyteller breaks away from the story in order to address the audience, or make editorial asides to the audience or her/himself; meaningful utterances that are not part of the narrative)

The mean scores for this measure for the entire population of second graders on the pretest and posttest, respectively (see Table 11), were .11 and .18 in Part 1. The mean scores for Part 2 were .39 and .11. The range for Part 1 was 0-2 on the pretest, and 0-3 on the posttest. The range for Part 2 was 0-10 on the pretest and 0-3 on the posttest. Of 71 students, 90% (64) made no comments, and 6 children made one on Part 1 of the pretest. On the post-test there were even fewer on Part 2. Comments were more likely to occur during story invention when there were no memory constraints.

11. Number of Inaccurate Communication Units (communication units containing an error in recall in Part 1, or an element inconsistent with the story or picture in Part 2)

The mean scores for this measure for the entire population of second graders on the pretest and

posttest, respectively (see Table 11), were .42 and .32 in Part 1; and .21 and .07 in Part 2. The range for Part 1 and Part 2 was 0-3 on the pretest and 0-2 on the posttest. No errors were made by 73% (52/71) of the population, and 18% (13/71) made one error on Part 1 of the pretest. There were even fewer occurrences on the posttest. These data suggest that a majority of second graders are able to listen attentively enough to remember a children's story accurately in the presence of picture cues.

Summary

Of the three main hypotheses tested in this study, none was supported and the null hypotheses could not be rejected.

I. There is no significant difference between the experimental and control groups in reading comprehension on a standardized reading test.

II. There is no significant difference between the experimental and control groups in reading comprehension on an informal cloze reading test.

III. There is no significant difference between the experimental and control groups in narrative language performance on a story-retelling/invention task as measured by:

A. Total language

B. Number of meaningful utterances

C. Mean length of utterance

D. Number of mazes

E. Number of original communication units

F. Story language

G. Percentage of total language in communication units

H. Percentage of picture-dependent communication units

I. Number of fragments

J. Number of comments

K. Number of inaccurate communication units

The amount of narrative language produced increased over time for both groups, including mazes, which had been expected to decrease. The narrative was longer for Part 1 (recall) than Part 2 (invention) in all instances.

CHAPTER FIVE

Summary and Conclusions

Summary

This study was undertaken to determine whether a program of creative dramatics would significantly affect performance in reading comprehension and language/thought of second graders. A random sample of second grade children participated in an experimental program of story dramatization of folk tales. The effect of this treatment condition on reading comprehension was measured by a standardized reading test and an informal cloze reading procedure. The effect of creative dramatics on language/thought was measured by narrative language performance on a story retelling/invention task. Results for 71 subjects were obtained from an analysis of covariance and analysis of variance with repeated measures.

Conclusions

Contrary to the general implications of prior research and theory indicating that creative dramatics training leads to improved reading and language skills, no such improvement was observed in this study. None of the specific hypotheses suggesting that creative

dramatics training would enhance reading comprehension (on the standardized Gates-MacGinitie test or on the informal Cloze reading test) or narrative language/ thought production (on a story retelling/invention task), was supported.

Limitations

The conclusions drawn from this study are subject to the following limitations:

1. It is possible that the statistical design employed in this study was too conservative. Results might have been less negative had the Gates-MacGinitie Reading Test not been used as a covariate, particularly for the Cloze task.

2. It is possible that the Cloze task was too difficult for the lowest readers, even though they were highly motivated to do it.

3. Twelve weeks may not have been sufficient time in which to accomplish all the goals of the creative dramatics program.

Discussion

Logically, there are three possible explanations for the failure to find significant effects for creative dramatics training on reading and language/thought performance in this study. First, it could be the case that prior research and theory supporting such an effect

is not applicable to the population of children sampled in this study. Second, the intensity and/or duration of the creative dramatics training were not strong enough to produce the desired effects. Third, the failure to find significant effects may have been due to inadequacies in the measurement of reading and language skills. These possibilities are each discussed in turn below.

1. Relevancy of prior research

It is arguable that even though the body of work cited in Chapters One and Two supports the idea that creative dramatics training will enhance reading and language skills, some of this work is not relevant to the present study. Thus, many of the empirical studies cited report positive findings for preschoolers and grades K-1 and may not apply to the second graders tested in this study. In other words, conclusions from prior research and theory may be limited by an age factor that has not previously been appreciated. It is also noteworthy that some of the prior studies were not conducted with rigorous controls or did not employ rigorous measures of reading and language/thought as were employed here.

2. Inadequate training in creative dramatics

Although both the content and frequency of the

creative dramatics sessions employed in this study were modelled on those reported to be effective in prior research, and were in accord with the experience of the author when doing remedial reading work with small groups of children, the training may simply have been insufficient to yield significant effects. The frequency and length of the sessions were a problem because they were limited by the necessity to maintain the regular schedule of the second graders. Furthermore, because the children were already within the normal range of reading and language skills, the impact of the creative dramatics sessions may have been smaller than anticipated. That is, if both the experimental and control groups were already performing at an approximately optimal level (as might be supported by the fact that both groups showed similar changes from the pretest to posttest periods) then it would have required a very powerful treatment to produce a significant increase in the reading and language skills of the experimental group.

3. Measurement of reading and language/thought performance

While it must be acknowledged that problems such as distractibility of the children during testing, biasing effects inadvertently created during the test sessions,

or careless work done by the coders may have rendered measurement of the dependent variables inadequate, this does not seem to have occurred. For one thing, the consistency of the results obtained suggests that the measures were reliable in the sense that there were no indications in the data of unusual fluctuations or randomness both within and between the pretest and posttest sessions. Since the author was present during reading posttesting and did not notice any irregularities, and the language elicitation was conducted by the same team of assistants during both the pretest and posttest, and the scorers proved to be highly reliable, there are no substantial reasons to think that the negative results of this study were due to inadequate or unreliable measurement of the reading and language/thought variables.

The validity of the informal Cloze reading test was examined by calculating its relationship to the comprehension subtest of the standardized Gates-MacGinitie Reading Test (the validity for which was discussed in Chapter Three). The product moment correlation coefficient between the two tests was .69. The narrative language/thought measures were based upon the studies by Loban and John, Horner and Berney discussed in Chapter Two. Although they did not address

construct validity directly, these authors based their work on earlier reputable research in language development. There appears to be little reason to believe that the language elicitation and segmentation procedures of the present study are invalid.

Of the three general explanations that might logically account for the results of this study, the most outstanding involves the apparent insufficiency or weakness of the creative dramatics training sessions. Measurement of the dependent variables assessing reading and language skills did not seem invalid. While the relevancy of prior research indicating that creative dramatics training would enhance these skills may be called into question on methodological grounds, the main problematic issue here concerns the applicability of much of the prior research findings to the population samples in this study. It is generally accepted by professionals in the fields of developmental psychology, education and remedial education that interventions at early ages are more likely to be successful than those attempted at later ages. In this connection, it is not unreasonable to consider that older children may be less sensitive to creative dramatics training than younger children, and/or, after such training may not show positive reading and language/thought gains as readily

as younger children.

In general, scrutiny of the results obtained indicated that the kind of creative dramatics training employed in this study does not improve performance on the reading comprehension and narrative language/thought measures that were used. The failure to find significant effects for creative dramatics training may have been due to a design problem. The creative dramatics training sessions were not sufficiently long, frequent or intense. Less clear cut, but also plausible, is the likelihood that older children are less responsive to creative dramatics training than younger children insofar as reading and language/thought performances are concerned.

Given this interpretation of the results, the question arises as to whether anything could have been done to prevent the problem identified. The creative dramatics training could have been intensified very directly by providing more frequent sessions, perhaps twice as many as were actually conducted. This would have created a more rigorous basis for testing the hypotheses, and provided a more definitive answer to the question of whether creative dramatics has an effect on the reading comprehension and language/thought of second graders.

Other results of interest

Apart from those results directly relevant to the hypotheses that have already been discussed, a number of others are noteworthy. For example, a very consistent pattern of results was obtained for many of the language/thought measures. Thus, for total language and the number of meaningful utterances (Table 6), and mean length of utterance (Table 7), significant main effects were found for the reading pretest, time and part. This indicates that the Gates-MacGinitie pretest was a predictor of these language/thought scores; that these scores improved significantly during the pretest to posttest time interval (reflecting maturation for both groups); and that language/thought scores were higher for Part 1 (story retelling), than Part 2 (story invention) of the story retelling/invention task. Less consistent results were obtained on the other language measures, but the reading pretest was a predictor of all the language/ thought measures except the number of mazes (Table 7).

Implications

Based upon the findings of this study, the following implications for classroom teachers are of note:

1. Creative dramatics might be more effective if it were incorporated into the language arts curriculum all year

long in order to allow ample development of the concepts necessary for the roles of player, playmaker, and audience.

2. Based upon the author's observations during the program, creative dramatics appeared to have positive personal and social effects on the participants. In particular, there were opportunities for individual attention, promotion of self-esteem in shy and low-achieving students, and legitimate channels for aggressive behavior for aggressive children.

3. Story-retelling holds promise as a language elicitation procedure, in that it produced longer protocols than story invention.

4. The cloze procedure has interesting ramifications for the development of children's use of causality and subordination (both of which are associated with reading success in the middle grades). Second grade students tended to use chaining when the first word of a sentence was deleted, i.e., they linked sentences with and or then regardless of how the sentences ended. Chaining was also observed during the story-retelling/invention task and appears to reflect the level of language development of that age group.

5. In line with what is known about early intervention strategies, the program of creative dramatics employed

in this study might have more demonstrable effects on reading and language/thought for children in kindergarten and first grade than second grade.

Suggestions for Future Research

As noted in the discussion, it is possible that if the creative dramatics training had been more intensive, it might have significantly improved reading and language/thought. Further research on this problem might benefit from the following suggestions:

1. Since it is not clear from prior research or theory just how much creative dramatics training may be necessary to make a significant impact on reading and language/thought, future research could investigate this question by varying the intensity of the training. That is, instead of employing one constant level of training as was done in this study, it would be useful to investigate the effects of at least two levels, such as moderate and high intensity training.
2. Future research should also consider the possibility that creative dramatics training varies in its effectiveness with the age of the subjects involved. Therefore, it would be useful to sample children from different grade levels rather than from a single grade.
3. Creative dramatics training might prove to have greater effects on the following groups of students:

kindergarten and first graders, poor readers, and children with personal and social difficulties.

4. Future research would benefit from more extensive pretesting of both the creative dramatics training material and the criterion measures to be employed.

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Appendix A

Permission to Participate in Study Form

Dear _____:

Mrs. Karen Rappoport, a member of the Roosevelt School faculty, is planning to do doctoral research with second grade children in the area of language development and reading achievement, which many authorities believe are closely linked. We would like permission to obtain and record a language sample for each second grader in December and May of this school year. The taping will take no longer than twenty minutes per child and will consist of a story that each child is asked to make up about pictures in a story book.

Half of the second grade will then be selected at random for participation in a creative dramatics program which will be used to supplement the language arts curriculum. These children will meet twice a week for a half-hour between January and May with Mrs. Rappoport. The program will consist primarily of hearing stories, discussing them, and acting them out spontaneously. It is believed that creative dramatics may help children improve in language and reading skills, especially vocabulary and comprehension. Children who participate in the dramatics program will be compared as a group with those second graders who do not take part in the special program. Language development will be compared for the two groups as well as reading scores on the Gates-MacGinitie Reading Test, administered to the second grade in November and May, and an informal reading test to be given in May. Individual names will not be used in the study or in any future publications.

We would appreciate your permission for your child to participate in this study. Please sign and indicate your approval. We would like to have this form returned to school as soon as possible. Thank you.

---

1. I give permission for my son/daughter,_____, to have a language sample recorded in December and May of the school year. YES_____ NO_____
2. I give my permission for my son/daughter,_____, to participate in a creative dramatics program if he/she should be chosen through a random selection procedure. YES_____NO_____

Parent's signature_____

Appendix B

Creative Dramatics Training Sample Lesson

Lessons were designed for 30 minute sessions with approximately 12 children per session)

I. Warm-up activities (exercises that include: body movement, sensory awareness, imagination, concentration, listening, speaking and characterization)

A. Movement

1. Reach for the stars (extreme body tension)
2. Rag Doll (complete relaxation)
3. Running
   a. Run in place slowly; faster
   b. Collapse on floor and rest

The movement exercises are all teacher-leader directed and coached from the sidelines. These are very rapid, and the children have been trained to respond to two commands: a raised hand for coming together quietly, and the word, "Freeze!", when all activity should cease so the leader can respond to the last one, or direct the next one.

Appendix B (continued)

II. Imagination and sensory awareness activity (while the children are resting on the floor, the leader speaks to them quietly and guides them through the following:)

A. Imagine that you have just finished cleaning up your room and your mother has told you to go out and play.

B. Stand up and in your place, pretend to run outside and down the street. Nobody is outside to play with. Cross the street and go to the park. (Watch out for cars!)

C. Make believe you take off your shoes so you can run barefoot. How does the grass feel? (possible responses: nice, cool, sticky, sharp, soft, etc.) Do you bounce more on the grass?

D. Now run through a puddle. How does that feel? (cool, wet, cold, shocking, nice, etc.) How does it sound? How do you sound when you feel the water?)

E. Run over to the trees and lie down in the shade. Rest. Look up at the trees and the sky. What do you see? (colors, sun, shadows, birds) Close your eyes.

Appendix B (continued)

F. Keep your eyes closed and "see" the trees and the sky. Relax. Sit up now.

III. Main Activity (read folk tale and dramatize story)

A. Read "The Three Little Pigs" (see Appendix C)

I am going to read to you now. This is a story you all know, "The Three Little Pigs". Let's concentrate on the story so we can remember it and act it out. (Read story)

B. Discussion

1.Plan the play

a. Who is in the first part of the story? How many characters are there? (Mother and the Three Pigs)

b. Where does the story take place? What is the setting? (at their house, on a farm, etc.)

c. What is their problem in this part of the story? (They have to leave home in this scene.)

d. Assign roles for:

Part 1: Mother and the Three Pigs

e. Reminders: concentrate, observe, remember, imagine, stay in character

Appendix B (continued)

C. Play (Dramatize part 1. Whoever is not in a scene is the audience and must be attentive.)

D. Evaluate the playing (the audience must be positive and constructive)

1. What did you really like about the play? Why?

2. Is there any part that needs work? Why?

3. Is there anything we can do differently?

E. Repeat this process for each part of the story, identifying the problem for each scene: The Three pigs have to build houses; the wolf wants to eat them; the pigs try to escape; and the ending. Different children must perform in subsequent groups so that all students have an opportunity to play the story.

F. Our time is up now. Next session we will replay the story. (The leader makes notes of story parts that need work and children with special needs.)

The first time the story is dramatized, it is usually done very quickly, with action predominating. It is important to try to have time to play the entire story

Appendix B (continued)

in order to fix the sequence of events in everyone's mind. This prepares the group for future, more intensive playing.

Follow-Up Lesson

The sequence of activities is the same, but with different warm-up activities and fewer sensory awareness activities so the story can be replayed. This time, the class will be divided into three small groups, each directed to prepare a different part of the story. Before they break into groups, there is discussion of character and motivation. For example, how might the pigs feel when Mother tells them they have to leave home? Will they like being alone? How will Mother feel? If everyone is sad, then why do they all leave? What would you pack if you had to leave home?

During this practice period, the leader circulates, making notes of problem areas as well as positive occurrences. Then each group presents the scene they have prepared. After replaying, there may be time for further evaluation. The leader may replay certain parts of the story with the children in order to help things along. If time permits, a different

Appendix B (continued)

version of the story may be read for comparison and possible replaying at a future date. Since time was limited, most stories were allowed just two sessions for work. The notes that are made are used for planning the next session's mini-lessons in order to help the children focus on different areas such as pantomiming actions during the play, remembering to stay in character, etc. Thus, mini-lessons follow up the playing of the previous session, as well as warm-ups and sensory activities which may focus on the same elements.

APPENDIX C

List of Stories Read during Treatment In The Order of Their Presentation

A Fly Went By
Mike McClintock
Beginner Books, Inc.
Random House Inc., 1958

Have You Seen My Puppy?
Adelaide Hall
Random House Inc., N.Y.
(Early Bird Book), 1968

Caps For Sale
Esphyr Slobodkina
Scholastic Book Services, N.Y., 1947

The Tall Books of Nursery Tales
Artists and Writers Guild, Inc.
Harper and Row, N.Y., 1944
A. The Three Bears
B. The Three Billy Goats Gruff
C. The Three Little Pigs
D. Little Red Riding Hood

The Three Billy Goats Gruff
Paul Galdone
Clarian Books
Ticknor and Fields: A Houghton Mifflin Company, N.Y., 1973

The Full Color Fairy Tale Book
R.C. Scriven (Ed.)
Gramercy Publishing Company N.Y., 1974
A. Hansel and Gretel
B. Jack and the Beanstalk

Jack and the Beanstalk
Retold by Stella Williams Nathan
Golden Press
Western Publishing Company, Inc.
Racine, Wisconsin, 1973

APPENDIX D

Cloze Training Procedure

I.

I like_____.

It tastes_____.

II. The Three Little Pigs

There was once an old Old Mother Pig who had three little pigs. They did not have _____ to eat. And so one day the Mother Pig said, "Little _____ , the time has come for you to go out and make a _____ of your own."

The Three Little Pigs said _____ to their mother and went out _____ make a house of their own.

Appendix D (continued)

CLOZE TASK

(page 1)

The Little Red Hen and the Fox

Once upon a time a Little Red Hen lived in a house upon a hill. Far down the hill, under a big, big stone lived a Fox and his mother.

One day the Fox said to his mother, "I _____ like a chicken to eat."

"The Little Red Hen _____ up on the hill," said his mother. "And she _____be very good to eat."

The Fox laughed and _____ "Mother, put the pot on the fire, and fill _____ full of water. I am going up the hill _____ get the Little Red Hen."

The Fox went up _____ hill with a big bag to get the Little _____ Hen.

Appendix D (continued)

(page 2)

The Little Red Hen was cleaning her house. _____ the Fox came to her house, he walked _____ in the door.

"Good morning, Little Red Hen," said _____ Fox. "I have come up the hill to see you."

The Little Red Hen did not like the Fox _____ she knew that the Fox liked to eat chickens. _____ she said:

"Good morning, Mr. Fox. You must be _____ after your long walk. Will you sit down by _____ fire?"

The Fox sat down. But when the Little _____ Hen went to put wood on the fire, the _____ jumped up. He put a bag right over the _____ Red Hen. He took a string out of his _____ and put it around the top of the bag.

"_____, I will have a Little Red Hen to _____," laughed the Fox. And he put the bag on _____ back and started down the hill.

Appendix D (continued)

(page 3)

Soon the Fox _____ very tired. He sat down under a tree and _____ to sleep.

The Little Red Hen had to get _____ of that bag. She had some scissors in her _____. She took her scissors out of her pocket and _____ the bag. Then Little Red Hen got out of _____ bag. She saw a big stone. She put the _____ in the bag. Then she sewed the bag where _____ had cut it.

Then the Little Red Hen ran _____ her house as fast as she could go.

Appendix D (continued)

(page 4)

Soon the Fox got up. He put the bag on his _____ and ran down the hill to his house.

"Did _____ bring me the Little Red Hen?" asked his mother.

"_____ is here in the bag," said the Fox.

"Let _____ put the Little Red Hen in the pot of _____ water," said the mother.

But into the pot went _____ big stone, not the Little Red Hen. And the _____ water went all over the Fox and his mother.

Oh, how they ran around and around. And never again did that Fox go up the hill to get the Little Red Hen.

Appendix E

Directions for Language Sample Elicitation for the Storyteller

This is Mrs._____. Today, I am going to tell you part of the story in this book, "The Flying Hockey Stick". All the words have been covered up and you will only look at the pictures. I want you to listen carefully because when I am done, you will have to remember the story and make up an ending yourself by looking at the pictures in the book. Then when you are ready, I would like you to show the book to someone else and tell him/her the whole story from the beginning. I would like to find out what kinds of stories first graders and kindergarten children like to hear. Remember to listen carefully so you can tell the whole story to another child who is in first grade or in kindergarten. Are you ready?

APPENDIX F

Procedures for Assistants During Language Elicitation

1. Welcome child.
2. Introduce yourself.
3. Ask student to sit down at the table with the book.
4. Sit down near child.
5. Start tape recorder one with directions and narration.
6. Monitor page turning (not too soon).
7. When narration ceases, stop tape recorder and ask if subject has any questions.
8. Set concealed stopwatch and rewind tape one.
9. Note name of storyteller on master list and tape along with number assigned to child.
10. Allow no more than 5 minutes for preparation for storytelling (stop the stopwatch).
11. Bring in audience, introduce and welcome.
12. Give directions to audience (see Appendix G).
13. Insert tape in tape recorder 2 and begin recording.
14. Ask subject to begin telling story.
15. Sit behind children to monitor procedure (pages).

APPENDIX F (continued)

16. If bell rings, or other distraction occurs, press pause control.
17. If storyteller blocks, ask, "Do you want to tell anything about this picture?" If there is no response, go to next page.
18. If there is no formal ending for the story, ask, "Is that the end of your story?" Then stop tape recorder.
19. Compliment storyteller.
20. Ask audience how s/he liked the story.
21. Thank both children for helping and doing a good job.
22. Have helpers escort children to their rooms.
23. Welcome next storyteller and repeat process.

Appendix G

Directions During Language Elicitation for the Audience

1. Hi. I am Mrs. _____. Do you two know each other?
2. (Introduce children to each other)
3. Please sit down over here. We know a book publisher who would like to know what kind of stories children like.
4. _____is going to tell you the story in this book while you look at the pictures.
5. Please don't say anything until _____ is done telling the whole story. Then you can talk about it when it is finished.
6. Do you have any questions?
7. (After story has been completed)

   How did you like that book?

   Didn't _____do a good job?

   Thank you for being such a good audience.

APPENDIX H

Scoring Directions

(Each scorer also referred to a list of categories and definitions described earlier in measurement procedures.)

1. Listen to the tape while reading the transcription.
2. Refer to the book illustrations and text for Part 1 and only the illustrations for Part 2.
3. Write a # to separate each communication unit or fragment from the next utterance.
4. Place a bracket around each maze.
5. Color code SL in the space above a Story Language utterance.
6. In the margin, write the code for each meaningful utterance completed on that line.
7. Count the number of words in each meaningful utterance and maze, and record it in the space above it.
8. At the bottom or back of each page, record the number of occurrences of mazes, fragments, comments,and story language. Then record the number of occurrences for all communication units according to their specific categories: picture-dependent, picture-independent, original, or inaccurate.

Appendix H (continued)

9. Record the total number of all words in each category of mazes, fragments and comments. Then record the number of words in communication units (which include P, I, O, X.).

Special notes

The following will be recorded differently in word counts:

Contractions = 2 words

Infinitives = 2 words

Proper names = 1 word

Repetitions: When a repetition occurs in a C.U. or fragment, and is not there for emphasis, it is a maze. In repetitions of communication units, retain the longest one for the C.U. word count and assign the other(s) to the maze count.

Blocking: When a child blocks in storytelling and needs encouragement, the utterance following the probe is an assisted response. It is not counted in any category.